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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

MAY, 1938

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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

MAY, 1938.

With the drought and cold temperatures continuing to retard growth, the pastoral scene up to the beginning of May was getting browner every day. Since then, however, a week of showers has greatly refreshed the pastures in most parts of the country. The rain came in good time for the turnip crop, and the grain brairds have recovered well after the dry weather.

The live stock trade which had ruled on most satisfactory lines for some considerable time, became affected by the shortage of grass for grazing stock, and the demand for store animals has greatly deteriorated of late. Stock-owners in particular will welcome the break in the weather, as it will ease the situation with regard to the hand-feeding of cattle and will tend to reduce their anxiety regarding water supplies, especially in the dairying districts.

With the agricultural show season here again farmers' thoughts will turn to lighter topics, and it is to be hoped that by the time this report is published anxiety about the effects of the drought will have been removed. Those readers visiting the Royal Ulster Agricultural Show, to be held at Balmoral on 25th to 28th May, will find useful information on the subject of the Ministry's Exhibit printed on page 25 of this report.

A special feature of this issue is the article on page 14 reviewing the results of the grading of pig carcases purchased for the roll and ham cure last year.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st MAY, 1938.

With the exception of a brief spell at the beginning of April, when some heavy rain showers intervened, the weather continued very dry and farmers' work in the fields proceeded without interruption throughout the month. Where ploughing was done early the work of cultivation progressed without undue hindrance, but the late ploughing of heavy clay soils was rendered most difficult by the hard baked condition of the ground. The preparation of the seed beds also was rather more troublesome than usual on account of the dry, rough and lumpy state of the soil. Good progress was, nevertheless, made with this work, and the sowing of oats and the planting of potatoes was almost completed in most districts. Many farmers, however, refrained from sowing flax, grass seed, turnips and mangels in fields where the top-soil had become parched with the drought and in which there was little hope of germination taking place. A fair amount of sowings of these crops was done elsewhere, but unless rain comes soon the prospects for these, as indeed for all growing crops and pastures, are very poor.

As in March, day temperatures ruled fairly high. On numerous occasions there were spells of strong bright sunshine, but the prevalence of harsh easterly and north-easterly winds, together with sharp ground frosts, particularly in the latter half of the month, considerably worsened the ill effects of the rainless conditions, and growing crops are very backward, whilst the bare and brown-coloured state of many pastures testifies to the unusually long spell of drought this spring. One of the redeeming features of the weather, however, was that the destruction of weeds became an easy matter, and many farmers took advantage of the opportunity to clean their fields and to burn the weeds which had withered up much quicker than usual.

Pastures are very backward and provide but little sustenance for grazing stock. Old pastures withstood the drought and the cold and harsh temperatures better than new ones. It was reported that the application of manures generally has had little effect owing to the lack of rain. Incidentally, very little manuring was done during April, but lime continued to be applied freely to tillage land.

With the quality of the grassland deteriorating rapidly during the past month grazing animals had to be given increased supplies of other foods. Fortunately there were ample supplies of home-grown foods for future requirements in all districts on account of the early spring this year, but the heavy drain on roots, hay and straw last month has reduced the stocks on many farms to a much greater extent than was considered likely a month ago. Although the dry and sometimes summer-like conditions favoured the general health of live stock, grazing cattle and sheep suffered in condition from the lack of a continued flush of early grass, and many animals are in a less satisfactory condition than is usual at this time of year. Dairy cattle were housed on most farms, but the general absence of good grass caused the milk yield to fall slightly. Supplies of purchased food-stuffs were easily obtainable, at prices having a slight downward tendency in one or two instances, until latterly when, with the increased demand for foodstuffs, there was a slight reaction noticeable in the case of the principal foods. The livestock trade suffered a setback towards the end of April, the drought position becoming more serious at English centres, and the demand for store animals slackened very considerably. It is, however, considered that the production of beef has not suffered to any great extent from weather causes, and the effects on supplies in the near future are not likely to be appreciable. Meanwhile, the beef trade continues steady and price fluctuations are very slight.

THE CROPS.

WHEAT.—The increased area under this crop is in fair condition on the whole. Early sowings are looking reasonably well, but late sowings have made very slow growth and in one or two instances fields have had to be reploughed.

OATS.—The sowing of this crop continued in areas where soil conditions were suitable, and this work, generally speaking, is now nearing completion. It is considered that the area under oats may show a slight increase this year with the prices of feeding stuffs remaining high, and on account of the attraction of the Barley and Oats Subsidy.

The condition of the brairds is very irregular. In hilly districts and light soil areas they are backward and attacks of the leather-jacket grub have done considerable damage. On the other hand early sown oats, and those crops growing on heavy clay soils, have made fairly good growth. Rain is badly needed, however, for this crop generally.

Decreasing supplies of oats were marketed during April and, on average, prices were ¼d. firmer on the month at 7/7½d. per cwt. Supplies of oat straw marketed last month were irregular, but in the aggregate much smaller than previously and prices were easier at an average of 42/- per ton.

BARLEY.—The brairds of early sown barley are mostly in a promising state but unless rain arrives soon much harm may be caused by the drought which has retarded the growth of the late sowings and in light soil areas where the seed bed was dry. Here again moister and warmer weather is urgently needed, especially to save those crops that are beginning to show the effects of the drought and the cold spells.

It is considered that there has been a slightly larger area sown under barley than in the 1937 season.

FLAX.—There has been some improvement in the demand for seed in a few districts last month, but the general position is little altered, and it is considered that despite an increased acreage in one or two districts the area sown under flax this year will show an appreciable decline.

Last month saw the end of the season for marketing the 1937 produce, and the decreased supplies were selling at lower prices, averaging 8/6d. per stone.

POTATOES.—The planting of the new crop progressed satisfactorily during April, and with conditions remaining favourable for the work it is thought that many farmers will plant a larger area than in 1937. On the other hand prices for last season's crop have not been remunerative, and the total area may show a decrease on this account.

In most areas the old crop has kept well and rather better than in 1937, but sprouting is giving more trouble than formerly. On account of the dullness of trade and the low prices ruling for potatoes, farmers continued to utilise supplies to a large extent for stock feeding, but with the rather late and unexpected improvement in the demand towards the end of April the heavy stocks of potatoes remaining on farms were being sold rapidly at the much better prices offered by the shipping merchants.

Although the prices for this crop eased up to the third week of April, a decided improvement in the demand, caused by the effects of the drought and cool temperatures on growing crops of early varieties, then took place and resulted in prices moving sharply upward. At local markets prices advanced from 2/1¾d. at the beginning of April to 3/4¼d. at the close and, all over, prices last month averaged 2/7½d. per cwt. as compared with 2/2d. in March. The improvement in trade was welcome, as farmers were able to dispose of their considerable remaining stocks of good quality ware potatoes to much better advantage than at any other time this season. The volume of this trade increased very considerably towards the end of the month, as the following figures in respect of stocks shipped to Great Britain show:—

Week ended	*Tons*	*Week ended*	*Tons*
2nd April, 1938	... 5,398	3rd April, 1937	... 6,570
9th ,,	... 5,470	10th ,,	... 8,743
16th ,,	... 4,163	17th ,,	... 8 875
23rd ,,	... 3,712	24th ,,	... 5,399
30th ,,	... 6,546	1st May, 1937	... 4,507

Growers' prices per ton, which stood at low levels of about £1 10s. 0d. to £2 for bagged potatoes, and from £1 5s. 0d. to £1 10s. 0d. for loose, appreciated very rapidly during the latter half of the month, and for the week ended 7th May, 1938, rose to the much higher levels stated below.

	Bagged	*Loose*
Up-to-Date (Red Soil) ...	£3 10 0 to £4 5 0	£3 10 0
Arran Banner	£3 10 0 to £3 15 0	£3 5 0
Arran Consul	£3 10 0 to £4 5 0	£3 15 0
Arran Victory	£3 10 0 to £4 0 0	£3 10 0
Kerr's Pink	£3 10 0 to £4 0 0	£3 10 0

TURNIPS.—Sowings have been delayed by the arid soil conditions, and only in one or two areas has any progress been possible with this work.

MANGELS.—Here again the very dry state of the seed beds has retarded sowings, and farmers are awaiting rain before carrying out this work.

HAY.—The new season's crop is very backward as growth has been retarded by the drought and the cold winds. In many fields the crop has a burnt appearance. Unless rain and heat arrive soon the yields will be light this year.

There are still fairly good supplies of last season's crop on hands despite the heavy drain on supplies in consequence of the failure of pastures through drought. On a number of farms it is anticipated that there will be a surplus to carry over to next season despite the present unpromising state of "keep".

Supplies marketed during April recorded a seasonal decline, and prices hardened on the month, first and second years (upland) hay rising by 1/3d. to 59/8d. and meadow hay by 3/4d. to 49/1 per ton.

At the close of the season some small lots of rye grass seed, at a few centres, made slightly higher rates, averaging 12/6d. per cwt. for Italian, and 8/9d. per cwt. for Perennial.

LIVE STOCK.

CATTLE.—Store cattle suffered somewhat from the shortage of grass, and although hand-feeding was done on a liberal scale the animals made rather less improvement than usual at this time of the year. The general health, however, was normally good. Dairy cattle are in fair to good condition as a rule, but the milk yield declined in one or two areas, and this was more noticeable where the animals were not housed. The general health remains good and, excepting a number of cases of sterility and abortion, calving proceeded satisfactorily.

Small to medium offerings of store animals were in keen request for the greater part of April, but towards the end of the month trade deteriorated and prices weakened with the position of "keep" worsening rapidly, and the uncertainty existing as to the probable effects on prices of the Anglo-Eire trade agreement. Trade for the fair offerings of dairy cattle was generally steady to firm, and prices showed little variation.

SHEEP.—Lambing progressed satisfactorily during April, and is now practically over. The fall of lambs has been heavier than last year in most districts, and with the weather favourable the mortality has been low among most flocks. Wool ball, however, was common among lambs in some districts, and the mortality rates were reported to have been high. Lambs and sheep made slow progress on account of the bareness of pastures. Supplies of sheep at fairs increased during April, but with the demand remaining limited to fats for slaughter, prices eased slightly during the month.

PIGS.—The variable supplies of young pigs remained in keen demand at fairs, and recent prices of from 27/- to 45/-, according to quality and condition, were maintained. Small numbers of sows for breeding were usually in good request, but prices were a little cheaper at from £6 to £11 10s. 0d. per head. The trade in dead pigs for the roll and ham cure was good, and supplies were usually sufficient for requirements.

HORSES.—The trade for horses was a little quieter in April and prices where altered, were cheaper on the month.

The best types of young farm horses were in fairly good demand at from £30 to £50, but ordinary types of workers were a slower trade at from £20 to £30 per head.

MILK.—The dry weather induced some farmers to turn their dairy cows on to grass, and with low temperatures and grass becoming scarce, the milk yields fell below seasonal levels. Elsewhere, where the animals were housed

and liberally fed supplies were fairly well maintained. In general, however, there were slightly smaller supplies available than is usual at this time of the year, but creameries experienced no appreciable shortage. The rates paid by creameries for milk delivered during April varied from 4¾d. to 5¼d. per gallon for milk delivered, the separated milk being returned to the farmer. The rate of equalisation payments for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes during March has been determined at .54d. per gallon in accordance with the Milk and Milk Products Acts, (Northern Ireland), 1934 to 1937.

It should be noted that, under the regulations, creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-war standard of living of working-class families at April 1st, was approximately 54 per cent. above the level of July, 1914, or 2 points less than that of the previous month, but 3 points above that ruling at April 1st, 1937.

At April 1st the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 37 per cent. above that of July, 1914, as compared with 40 per cent. at March 1st, and 35 per cent. a year ago. This decline in the index was largely the result of a substantial fall in the price of eggs; there were also, however, slight reductions in the prices of most of the other commodities used in the compilation of the index.

THE MARKETS DURING APRIL.

Supplies of vegetables at the markets during April were adversely affected by the drought. With the exception of pamphrey, which increased heavily in supply and fell in price (the average price easing by 3d. to 11d. per dozen) the supplies of other vegetables were smaller as compared with the previous month, and price movements generally were irregular. Broccoli at 1/10d. per dozen, and savoys at 1/6d. per dozen were 2d. and 1¼d. dearer respectively, but leeks at 5d. per bunch and parsley at 5½d. per bunch cheapened on the month by ¼d. and 2¼d. respectively. Parsnips were 3d. dearer at 7/9d. per cwt., and garden turnips firmed to prices ranging from 1/- to 1/2d. per cwt., but carrots cheapened by ¾d. to 9/8d. per cwt.

Supplies of farmers' butter were lighter on the month, both print and lump recording decreases, which was more marked in the case of the lump variety. Print butter was ½d. dearer at 1/4d. per lb., while lump was unchanged in

price at 1/2¾d. per lb. Hen eggs recorded seasonal increases, but duck eggs were scarcer than in March. Prices as fixed by the Ministry from week to week, which showed a seasonal decline during the month of March, recorded an upward trend in April, as shown in the table below.

In the poultry section supplies of hens and chickens were smaller as compared with the previous month, but ducks were more numerous. All three classes were dearer on the month, hens increasing in price by 1¾d. to 1/11d. each, chickens by ½d. to 2/11d. each, and ducks by 1d. to 2/3d. each. The prices per lb. live weight paid by wholesale merchants also firmed on the month, and ranged from 8d. to 9½d. per lb. for winter chickens, 10d. to 1/- per lb. for spring chickens, 4½d. to 7d. for hens, and 4d. to 7½d. for ducks. At Omagh small lots of unwashed wool were unchanged in price at 8d. per lb. for long, and 6d. per lb. for mountain.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

WHOLESALE DEALERS' PRICES.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks, as compared with the average prices at markets for the corresponding weeks of 1937.

Week ended	1938				1937			
	Hen Eggs per lb.*		Duck Eggs per doz.*		Hen Eggs per lb.		Duck Eggs per doz.	
	s.	d.	s.	d.	s.	d.	s.	d.
April 2nd	0	5¼	0	8	0	5¾	0	10
„ 9th	0	5½	0	7½	0	5½	0	10
„ 16th	0	5¾	0	8	0	5½	0	8½
„ 23rd	0	6¼	0	8	0	5¼	0	8½
„ 30th	0	7	0	8½	0	5½	0	8½
May 7th	0	7	0	10	0	5¼	0	8¼

*Where hen eggs are delivered by the producer to the packing store of a licensed wholesale dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938.

The following are the standard deductions :—

Hen Eggs : "Seconds" and soiled eggs ½d. per egg, Rejects ¾d. per egg.

Duck Eggs : Rejects ¾d. per egg.

LIVE STOCK CENSUS, APRIL, 1938.

A further quarterly census of live stock was taken at the 1st April, last. The census was taken on lines similar to those in October and April of last year, and in the same months in 1936 and 1935. Forms were sent to some 19,000 farmers with a request that they should supply particulars of the numbers of cattle, sheep and pigs on their farms at the 1st April, 1938, and 10,000 made returns. The numbers of live stock in Northern Ireland were estimated from these returns.

The result of the estimate, together with the estimated number of live stock at the 1st April, 1937, and the numbers returned at the complete enumeration at the 1st June, 1937, and the 1st January, 1938, are shown in the table below with the percentage changes which have occurred in the numbers since each of those dates.

	1st April, 1938	1st January, 1938	1st June, 1937	1st April, 1937	% Increase April, 1938. as compared with		
					January, 1938	June, 1937	April, 1937
Milch Cows ..	224,000	229,999	237,241	241,000	−2.6	−5.6	−7.1
Heifers in calf	40,000	34,863	22,646	34,000	+14.7	+76.6	+17.6
Other Cattle ..	419,000	417,543	470,222	448,000	+0.3	−10.9	−6.5
Total Cattle ..	683,000	682,405	730,109	723,000	+0.1	−6.5	−5.5
Ewes	398,000	426,272	376,916	384,000	−6.6	+5.6	+3.6
Other Sheep ..	430,000	134,620	451,935	357,000	+219.4	−4.9	+20.4
Total Sheep ..	828,000	560,892	828,851	741,000	+47.6	−0.1	+11.7
Sows ..	56,000	53,107	54,399	57,000	+5.4	+2.9	−1.8
Other Pigs ..	486,000	469,980	515,659	517,000	+3.4	−5.8	−6.0
Total Pigs ..	542,000	523,087	570,058	574,000	+3.6	−4.9	−5.6

PRICES OF AGRICULTURAL PRODUCE.

Table showing the average prices of agricultural produce in Northern Ireland during the three months ended 31st March, 1938, together with comparative figures for the same period in 1937, and the average prices ruling during the first quarter of the years 1911-1913:—

COMMODITY.	Quarter ended 31st March.			Percentage increase or decrease in price as compared with the corresponding period 1911-13.	
	NORTHERN IRELAND.		ULSTER.		
	1938	1937	1911-13	1st Quarter, 1938	1st Quarter, 1937
	£ s. d.	£ s. d.	£ s. d.	%	%
Oats (White) ... ... per cwt.	0 7 5½	0 6 9	0 6 7¾	+12.23	+ 1.57
Potatoes ... ... do.	0 2 3¼	0 4 1	0 3 2½	−29.22	+27.27
Hay, Clover ... ... do.	0 3 0	0 3 6½	0 3 5¼	−12.73	+ 3.03
,, Meadow ... ... do.	0 2 4½	0 2 6½	0 3 4¾	−30.07	−25.15
Grass Seed, Perennial ... do.	0 9 0	0 15 11½	0 12 6½	−28.24	+27.24
Flax ... ... per stone	0 9 11	0 9 8	0 8 9¾	+12.53	+ 9.69
Calves (Young) ... ... per head	2 16 0	1 11 7	1 12 7½	+71.65	− 3.19
Store Cattle, 6-12 months ... do.	8 11 8	6 14 1	4 16 11½	+77.05	+38.29
,, 1-2 years ... do.	11 2 10	9 2 11	7 12 2	+46.44	+20.21
,, 2-3 ,, ... do.	13 7 10	11 9 0	10 1 1¼	+33.18	+13.87
Fat Cattle, 2-3 ,, ... do.	17 4 6	13 15 9	13 7 4	+28.86	+ 3.15
,, Cows and Bulls do.	13 10 6	11 2 6	13 10 1	+ .15	−17.62
Springers (Cows and Heifers) do.	18 8 7	15 12 6	14 16 1	+24.49	+ 5.54
Milch Cows (down calved) ... do.	17 0 5	14 13 6	13 10 3¼	+25.95	+ 8.59
Fat Sheep, over 2 years ... do.	1 15 6	1 13 10	1 17 6	− 5.34	− 9.78
Sows for Breeding ... ... do.	8 2 6	6 8 4	5 10 9	+46.73	+15.88
Young Pigs, 8-10 weeks old ... do.	1 14 0	1 8 9	1 4 2¼	+40.57	+18.86
Pork ... ... per cwt.	3 6 11	3 4 5	2 14 7		+18.02
Butter, Farmers' ... ... per cwt.	7 0 4½	5 10 2	5 9 3½	+28.44	+ .80
Hen Eggs ... ... per lb.	0 0 7¼	0 0 7¼	*0 9 6¼	—	—

* All-Ireland price per 120.

Crop prices during the first three months of this year recorded some fluctuations compared with the previous quarter, principally in the case of oats which, on account of the dearness of feeding stuffs, advanced appreciably in price, and flax also which was a shade firmer. Excepting these crops for which average prices were above those shown for the first quarter of 1937, crop prices generally eased further below last year's levels. The reduction was most noticeable in the case of potatoes and grass-seed, for which trade has been most disappointing throughout the 1937/38 season. With supplies of hay much better than for the previous feeding season, and with the weather of the first three months of this year being rather less severe, quotations for this crop finished lower than in 1937. Payments under the Barley and Oats Subsidy Scheme to be made in respect of the crop harvested last year will provide some additional gain to oat growers, but the general position of prices for the principal crops grown in Northern Ireland remained unsatisfactory throughout the quarter under review.

The live stock industry, on the other hand, continued to improve, and prices appreciated further during the first three months of this year. Compared with the 1937 levels store cattle, generally speaking, were almost £2 per head dearer, and fat cattle rose by about £2 15s. per head, or approximately 6/- per cwt. Considerable gains were recorded in the case of dairy cattle, and fat sheep also shared to some extent in the general upward movement. The same can be said of young pigs for which a well sustained demand brought about a general hardening of prices since the winter quarter.

In regard to provisions, the price of pork being fixed by statutory authority reflected to some extent the upward trend in the cost of production. Farmers' butter also remained much dearer than a year ago on this account, whilst the level of hen egg prices last quarter, as fixed by the Ministry of Agriculture, was similar to that recorded for the first three months of last year.

MARKETING OF DEAD PIGS.

GRADING RESULTS IN 1937.

Up to the end of November, 1934, the sale of pig carcases by producers to roll and ham curers was negotiated solely on a weight basis. In December, 1934, the Ministry, with the support of the Bacon Marketing Board and the Pigs Marketing Board, introduced a scheme of compulsory grading, and prescribed definite grades based on the depth of fat at the shoulder. The grading is carried out at the curing factories by Veterinary Officers of the Ministry, the cost of the service being shared by the Pigs Marketing Board and the curers.

Particulars of the grade standards in force in 1935 and 1936 for the different dead weight classes of roll and ham pig carcases were as follows :—

Dead Weight Class	Medium thickness of back fat at the shoulder.		
	Grade A	Grade B	Grade C
I. c.1.1.14 to c.1.2.14 ..	From $1\frac{1}{4}''$ to $1\frac{7}{8}''$	From $2''$ to $2\frac{1}{8}''$	From $2\frac{1}{4}''$ to $2\frac{1}{2}''$
II. c.1.2.15 to c.1.3.14 ..	$1\frac{3}{8}''$ to $2''$	$2\frac{1}{8}''$ to $2\frac{1}{4}''$	$2\frac{3}{8}''$ to $2\frac{1}{2}''$
III. c.1.3.15 to c.2.0.0 ..	$1\frac{1}{2}''$ to $2\frac{1}{8}''$	$2\frac{1}{4}''$ to $2\frac{1}{2}''$	$2\frac{5}{8}''$ to $2\frac{3}{4}''$
IV. c.2.0.1 to c.2.0.14 ..	$1\frac{5}{8}''$ to $2\frac{1}{8}''$	$2\frac{1}{4}''$ to $2\frac{5}{8}''$	$2\frac{3}{4}''$ to $2\frac{7}{8}''$

Pig carcases between c.1.1.14 and c.2.0.14 under Grade A measurements were graded U.L., while those over Grade C measurements were graded U.F.

Pig carcases in the following categories were classified as "Ungraded" :—

(1) Carcases weighing less than c.1.1.14 or more than c.2.0.14 ;

(2) Wholly or mainly black pigs, boars, rigs or stags, and sucked sows.

As from the 1st January, 1937, however, the grading regulations were extended by the Pigs Marketing (Grading) (Northern Ireland) Order, 1936, to apply to pig carcases weighing less than c.1.1.14. and the following dead weight classes and quality grades were accordingly prescribed :—

Dead Weight Classes	Quality Grades				
	1	2	3		
I. Under c.1.0.21 ..	Maximum back fat $1\frac{3}{16}$ ins.	Maximum back fat $1\frac{7}{16}$ ins.	All other pigs suitable for bacon.		
II. c.1.0.21 to c.1.2.3 ..	Maximum shoulder fat 2 ins.	Maximum shoulder fat $2\frac{1}{4}$ ins.			
	Maximum loin fat $1\frac{3}{16}$ ins.	Maximum loin fat $1\frac{7}{16}$ ins.			
	Maximum thickness of back fat at shoulder.				
	A	B	C	U.L.	U.F.
III. c.1.2.4 to c.1.2.14 ..	From $1\frac{1}{4}''$ to $1\frac{7}{8}''$	From $2''$ to $2\frac{1}{8}''$	From $2\frac{1}{4}''$ to $2\frac{1}{2}''$	Under	Over
IV. c.1.2.15 to c.1.3.14 ..	$1\frac{3}{8}''$ to $2''$	$2\frac{1}{8}''$ to $2\frac{1}{4}''$	$2\frac{3}{8}''$ to $2\frac{1}{2}''$	Grade A	Grade C
V. c.1.3.15 to c.2.0.0 ..	$1\frac{1}{2}''$ to $2\frac{1}{8}''$	$2\frac{1}{4}''$ to $2\frac{1}{2}''$	$2\frac{5}{8}''$ to $2\frac{3}{4}''$	measure-	measure-
VI. c.2.0.1 to c.2.0.14 ..	$1\frac{5}{8}''$ to $2\frac{1}{8}''$	$2\frac{1}{4}''$ to $2\frac{5}{8}''$	$2\frac{3}{4}''$ to $2\frac{7}{8}''$	ments.	ments.

Two amending Orders were made by the Ministry during 1937, the first of which prescribed that as from the 15th March pig carcases weighing less than c.1.0.21. should be classified as "Ungraded" and the second sub-dividing weight Class II. into two separate weight ranges, as follows, with effect as from the 1st August:—

Dead Weight Classes.	Quality Grades				
	1	2	3	U.L.	U.F.
I. c.1.0.21 to c.1.1.13 ..	Maximum back fat $1\frac{3}{16}$ ins.	Maximum back fat $1\frac{7}{16}$ ins.	Maximum back fat $1\frac{9}{16}$ ins.		
II. c.1.1.14 to c.1.2.3 ..	Maximum shoulder fat 2 ins.	Maximum shoulder fat $2\frac{1}{4}$ ins.	Maximum shoulder fat $2\frac{3}{8}$ ins.	Under $\frac{3}{4}''$ back fat.	Over Grade 3 measure-
	Maximum loin fat $1\frac{3}{16}$ ins.	Maximum loin fat $1\frac{7}{16}$ ins.	Maximum loin fat $1\frac{9}{16}$ ins.		ments.

As a consequence of the changes which were made in the grading regulations in force in 1937 the grading results for the year are not readily comparable with those for the years 1935 and 1936 except in respect of the two weight classes c.1.3.15. to c.2.0.0. and c.2.0.1. to c.2.0.14.

The data presented in the tables which follow is based on the summarised particulars of the purchase and grading statements which curers are required to furnish weekly to the Ministry. These statements give full particulars of the weight, grade and value of every pig carcase purchased from producers. In 1935 the number of pig carcases accounted for was about 440,000, in 1936 almost 521,000, while in 1937 the number was approximately 459,000.

SEASONALITY OF MARKETING.

The following table shows the number of carcases marketed each month, expressed as a percentage of the total for the year, in each of the years 1935, 1936 and 1937, together with average figures for the five-year period 1930-34 :—

Month.	1935	1936	1937	1930–34
	%	%	%	%
January ..	8.1	8.1	6.8	8.0
February ..	6.8 } 21.0	6.9 } 22.6	6.8 } 21.5	6.5 } 21.5
March ..	6.1	7.6	7.9	7.0
April ..	7.5	8.0	8.7	7.4
May ..	8.4 } 24.4	8.0 } 24.3	7.7 } 23.0	7.3 } 22.6
June ..	8.5	8.3	6.6	7.9
July ..	6.7	7.5	8.6	6.5
August ..	8.6 } 25.0	7.0 } 23.7	9.1 } 27.9	9.5 } 26.0
September ..	9.7	9.2	10.2	10.0
October ..	12.2	10.9	10.6	11.1
November ..	9.1 } 29.6	9.8 } 29.4	8.8 } 27.6	11.2 } 29.9
December ..	8.3	8.7	8.2	7.6
	100.0	100.0	100.0	100.0

It will be noted that in January, 1937, the proportion of pigs marketed fell to 6.8 per cent. as compared with 8.1 per cent. in each of the previous two years, and 8 per cent. in the 1930-34 period. This was due primarily to the curtailment of purchases by curers owing to prices in January being based on the Greig Award in Great Britain.

PIG CARCASES BY WEIGHT CLASSES.

Table showing the percentages of pig carcases falling within the weight ranges indicated in each month of the year 1937.

Month	Under c.1.0.21	c.1.0.21 to c.1.1.13	c.1.1.14 to c.1.2.3	c.1.2.4 to c.1.2.14	c.1.2.15 to c.1.3.14	c.1.3.15 to c.2.0.0	c.2.0.1 to c.2.0.14	Over c.2.0.14	Total
	%	%	%	%	%	%	%	%	
January ..	1.52	3.42	8.60	17.74	52.13	11.77	3.57	1.25	100
February ..	1.86	3.77	8.72	19.58	50.82	10.72	3.29	1.24	100
March ..	2.81	6.46	12.75	23.00	45.88	6.94	1.56	.60	100
April ..	2.24	5.42	11.25	24.75	47.45	6.81	1.50	.58	100
May ..	1.50	3.91	9.50	24.29	50.19	8.16	1.83	.62	100
June ..	1.49	3.05	6.25	21.33	52.48	11.25	3.08	1.07	100
July ..	1.59	5.44	13.37	16.90	47.84	10.52	3.26	1.08	100
August ..	1.88	6.46	17.14	18.37	44.63	8.18	2.45	.69	100
September ..	1.24	5.16	15.62	19.19	48.23	8.06	1.95	.55	100
October ..	.95	3.83	12.94	17.22	51.71	10.10	2.56	.69	100
November ..	.73	3.21	10.92	15.33	52.08	12.90	3.76	1.07	100
December ..	1.06	3.76	11.47	15.27	49.99	12.70	4.11	1.64	100
Average for 1937	1.55	4.56	11.88	19.31	49.34	9.76	2.70	.90	100
Average for 1936	9.6		38.1		43.3	6.8	1.6	.6	100
Average for 1935	9.4		39.4		41.7	6.8	1.8	.9	100

It will be observed that in 1937 almost one-half of the carcases bought by roll and ham curers were within the weight range c.1.2.15. to c.1.3.14. and that there was a marked reduction in 1937 in the purchases of pig carcases weighing less than c.1.2.14. as compared with 1935 and 1936.

In the following table are given the average weight and the nett value of all carcases marketed during each month of the years 1935, 1936 and 1937.

Month	Average weight of carcase			Average value of carcase (less levies paid to Pigs Marketing Board).		
	1935	1936	1937	1935	1936	1937
	c. q. lb.	c. q. lb.	c. q. lb.	£ s. d.	£ s. d.	£ s. d.
January ..	1 2 15	1 2 16	1 2 23	4 15 5	4 10 0	5 9 11
February ..	1 2 16	1 2 15	1 2 22	4 17 2	4 9 3	5 7 1
March ..	1 2 13	1 2 13	1 2 15	4 17 7	4 8 5	5 7 10
April ..	1 2 12	1 2 12	1 2 17	4 15 0	4 9 0	5 6 8
May ..	1 2 13	1 2 12	1 2 19	4 12 6	4 7 9	5 12 0
June ..	1 2 9	1 2 12	1 2 23	4 11 6	4 9 7	5 14 4
July ..	1 2 13	1 2 13	1 2 20	4 13 0	4 10 6	5 10 8
August ..	1 2 14	1 2 13	1 2 17	4 11 2	4 9 7	5 5 8
September ..	1 2 15	1 2 15	1 2 18	4 9 4	4 11 0	5 6 10
October ..	1 2 17	1 2 17	1 2 22	4 9 0	4 16 1	5 9 10
November ..	1 2 19	1 2 20	1 2 24	4 9 1	5 1 0	5 13 3
December ..	1 2 17	1 2 17	1 2 24	4 6 7	4 18 8	5 14 7
Average for year ..	1 2 15	1 2 15	1 2 20	4 11 10	4 12 2	5 9 9

The outstanding feature of this table is the increase in the average weight of carcase in 1937, the monthly figures being consistently higher than in 1935 and 1936, and the average for the year being 5 lb. greater than in the previous two years. With regard to the average nett value of carcases in 1937 it should be mentioned that a trading levy at the rate of 2/- per pig was in force during the period 19th July - 30th November.

GRADING RESULTS.

Owing to the changes in the Grading Regulations in 1937 it is not possible to make a strict comparison of the grading results for the year with those for 1935 and 1936, but by grouping corresponding grades together a fairly true indication may be obtained as to the quality of the pigs marketed in 1937. The figures in the following table relate to pig carcases within the weight limits c.1.0.21 to c.2.0.14.

Month	Grades 1 & A	Grades 2 & B	Grades 3 & C	Ungraded	Total
	%	%	%	%	
January ..	38.59	38.05	17.24	6.12	100
February ..	38.91	37.63	16.50	6.96	100
March ..	37.23	37.12	19.21	6.44	100
April ..	38.32	36.34	18.93	6.41	100
May ..	37.31	37.04	19.58	6.07	100
June ..	34.75	39.20	18.76	7.29	100
July ..	35.06	38.18	19.63	7.13	100
August ..	35.24	37.67	17.94	9.15	100
September ..	37.42	37.69	17.48	7.41	100
October ..	38.99	39.20	15.66	6.15	100
November ..	40.64	38.70	14.40	6.26	100
December ..	37.10	40.15	15.06	7.69	100
Average for year ..	37.50	38.07	17.48	6.95	100

In the case of Grade 1 and Grade A carcases it will be observed that the proportion was lowest in June and highest in November. The Grade 2 and Grade B figures did not fluctuate appreciably throughout the year, while the Grade 3 and Grade C figures were highest in July and lowest in November. Speaking generally, the results in 1937 correspond closely with those for 1935 and 1936.

GRADING RESULTS BY WEIGHT CLASSES.

Weight Class—c.1.0.21. to c.1.1.13.
(4.56 per cent. of total carcases marketed).

Month	Grade 1	Grade 2	Grade 3	Ungraded	Total
	%	%	%	%	%
January ..	42.27	32.15	25.21	.37	100
February ..	47.19	33.19	18.28	1.34	100
March	44.80	31.31	23.42	.47	100
April	43.46	32.89	23.00	.65	100
May	39.07	32.26	27.38	1.29	100
June	39.61	33.66	25.97	.76	100
July	47.32	31.45	20.58	.65	100
August	49.54	30.69	19.47	.30	100
September ..	52.20	30.18	17.23	.39	100
October ..	51.83	29.84	17.81	.52	100
November ..	53.48	29.98	15.91	.63	100
December ..	51.17	32.27	16.04	.52	100
Average for year ..	47.38	31.45	20.56	.61	100

From the 1st January to the 31st July all pigs not in Grade 1 or 2 which were suitable for curing into bacon were classified as Grade 3. From the 1st August, however, definite measurements were prescribed in respect of Grade 3 and two additional classifications were included, viz. U.L. (under $\frac{3}{4}$ in. back fat) and U.F. (over Grade 3 measurements). In the foregoing table, and also in the one which follows, the figures for U.L. and U.F. have been added to the Grade 3 figures in order to preserve the continuity of the results.

It will be observed that the percentage of Grade 1 carcases was lowest in May and highest in November, and that the position in the case of Grade 3 carcases was exactly the reverse. There was no significant variation in the Grade 2 figures throughout the year.

Weight Class—c.1.1.14. to c.1.2.3.
(11.88 per cent. of total carcases marketed).

Month	Grade 1	Grade 2	Grade 3	Ungraded	Total
	%	%	%	%	%
January	23.26	37.01	39.51	.22	100
February ..	26.61	36.30	36.42	.67	100
March	24.52	36.11	39.15	.22	100
April	27.72	35.71	36.17	.40	100
May	22.86	34.79	41.73	.62	100
June	21.52	36.13	41.77	.58	100
July	26.93	36.34	36.44	.29	100
August	28.43	36.49	34.96	.12	100
September ..	31.17	35.91	32.79	.13	100
October ..	30.81	37.66	31.30	.23	100
November ..	32.14	37.94	29.56	.36	100
December ..	29.10	39.23	31.41	.26	100
Average for year ..	27.96	36.67	35.03	.34	100

It will be noted that the proportion of Grade 1 carcases was lowest in June and highest in November, that the Grade 2 figures were relatively steady, and that the percentage of Grade 3 carcases was greatest in June and lowest in November. It is also worthy of note that the average proportion of Grade 1 carcases in this weight class was very much below the corresponding figure in the weight class c.1.0.21. to c.1.1.13.

Weight Class—c.1.2.4. to c.1.2.14.

(19.31 per cent. of total carcases marketed).

Month	Grade A	Grade B	Grade C	U.L.	U.F.	Un-graded	Total
	%	%	%	%	%	%	
January ..	50.23	34.19	12.76	.07	1.36	1.39	100
February ..	48.28	36.32	12.58	.07	1.45	1.30	100
March ..	47.88	35.90	13.53	.07	1.63	.99	100
April ..	48.02	34.86	14.22	.07	1.95	.88	100
May ..	47.89	34.55	14.81	.06	1.98	.71	100
June ..	43.91	37.00	15.56	.08	2.34	1.11	100
July ..	44.70	37.33	14.65	.06	2.33	.93	100
August ..	44.25	38.15	14.48	.05	2.31	.76	100
September ..	48.09	35.80	13.06	.02	2.13	.90	100
October ..	49.73	35.99	12.00	.07	1.58	.63	100
November ..	51.36	35.25	11.37	.05	1.10	.87	100
December ..	45.71	38.03	13.17	.02	1.93	1.14	100
Average for year	47.53	36.05	13.57	.05	1.86	.94	100

The proportion of Grade A carcases ranged from 43.91 per cent. in June to 51.36 per cent. in November, averaging 47.53 per cent. over the year. The Grade B figures were more or less steady in the neighbourhood of 36 per cent., but the Grade C and U.F. figures were highest in June and lowest in November.

Weight Class—c.1.2.15. to c.1.3.14.
(49.34 per cent. of total carcases marketed).

Month	Grade A	Grade B	Grade C	U.L.	U.F.	Un-graded	Total
	%	%	%	%	%	%	
January ..	40.77	38.88	16.28	.05	3.19	.83	100
February ..	40.40	38.28	16.33	.03	4.01	.95	100
March ..	38.27	39.38	18.09	.04	3.49	.73	100
April ..	38.57	37.78	18.63	.03	4.31	.68	100
May ..	37.34	39.14	18.46	.04	4.31	.71	100
June ..	35.66	40.02	18.36	.01	5.03	.92	100
July ..	35.63	39.47	18.74	.02	5.30	.84	100
August ..	35.18	39.44	19.32	.02	5.22	.82	100
September ..	36.49	39.11	19.18	.04	4.48	.70	100
October ..	38.99	40.47	16.79	.04	3.07	.64	100
November ..	41.36	39.15	15.36	.02	3.33	.78	100
December ..	38.42	40.28	16.40	.02	4.18	.70	100
Average for 1937	38.09	39.32	17.65	.03	4.14	.77	100
Average for 1936	33.90	40.38	19.61	.03	5.17	.91	100
Average for 1935	32.88	40.47	19.68	.04	5.05	1.88	100

It will be noted that the proportion of Grade A carcases tended to fall in the summer and rise in the winter. The Grade B figures remained comparatively steady, while the Grade C and U.F. figures were higher in summer than in winter. Taking Grade A and Grade B results together the figure for 1937, viz., 77.41 per cent., shows an appreciable improvement on the figures for 1935 and 1936 (73.35 per cent. and 74.28 per cent. respectively).

Weight Class—c.1.3.15. to c.2.0.0.
(9.76 per cent. of total carcases marketed).

Month	Grade A	Grade B	Grade C	U.L.	U.F.	Un-graded	Total
	%	%	%	%	%	%	
January ..	34.93	46.91	13.99	.03	3.43	.71	100
February ..	36.40	45.40	13.55	.03	3.33	1.29	100
March ..	31.87	48.42	15.12	.04	3.67	.88	100
April ..	34.19	46.01	15.38	.04	3.06	1.32	100
May ..	34.33	43.17	16.70	.00	4.64	1.16	100
June ..	29.99	48.56	16.55	.09	4.11	.70	100
July ..	33.16	45.18	15.60	.05	4.81	1.20	100
August ..	31.87	43.87	17.53	.00	5.65	1.08	100
September ..	31.99	46.95	16.15	.00	3.88	1.03	100
October ..	36.10	46.21	13.60	.06	3.10	.93	100
November ..	38.07	45.42	12.97	.02	2.83	.69	100
December ..	36.30	48.29	11.66	.04	2.84	.87	100
Average for 1937	34.40	46.23	14.66	.03	3.71	.97	100
Average for 1936	30.74	47.78	15.88	.02	4.45	1.13	100
Average for 1935	30.08	45.77	17.20	.03	4.61	2.31	100

Here again the percentage of Grade A carcases was lowest in June and highest in November. In the case of Grade C and U.F. carcases the figures were highest in the summer and lowest in the winter. It will also be observed that the results for 1937 were better than in either of the previous two years.

Weight Class—c.2.0.1. to c.2.0.14.

(2.70 per cent. of total carcases marketed).

Month	Grade A	Grade B	Grade C	U.L.	U.F.	Un-graded	Total
	%	%	%	%	%	%	
January ..	24.28	53.78	16.19	.00	3.05	2.70	100
February ..	27.89	54.21	12.82	.00	3.52	1.56	100
March ..	27.56	51.94	15.73	.00	3.71	1.06	100
April ..	22.50	56.50	14.33	.17	3.17	2.88	100
May ..	24.16	49.54	17.13	.15	5.81	3.21	100
June ..	24.14	50.43	17.38	.11	5.79	2.15	100
July ..	24.28	51.37	16.86	.16	5.69	1.64	100
August ..	26.96	46.86	18.24	.00	7.36	.58	100
September ..	22.63	51.90	17.41	.00	6.42	1.64	100
October ..	25.52	54.09	14.77	.16	4.50	.96	100
November ..	28.88	51.82	15.33	.00	2.91	1.06	100
December ..	25.27	57.51	13.15	.06	2.39	1.62	100
Average for 1937	25.53	52.69	15.64	.06	4.40	1.68	100
Average for 1936	23.90	52.21	15.90	.12	5.05	2.82	100
Average for 1935	21.76	54.04	15.60	.08	4.95	3.57	100

It will be observed that the proportion of Grade A carcases was highest in November and that the Grade C and U.F. figures tended to be lower in winter than in summer. The results for the year also indicate an improvement on those for 1935 and 1936.

AVERAGE WEIGHTS OF GRADE A, GRADE B, AND GRADE C CARCASES.

In the following table are given the average weights of carcases falling into Grade A, Grade B, or Grade C during each month of 1937.

Month	Weight Class c.1.2.4 to c.1.2.14			Weight Class c.1.2.15 to c.1.3.14			Weight Class c.1.3.15 to c.2.0.0			Weight Class c.2.0.1 to c.2.0.14		
	Grade A	Grade B	Grade C	Grade A	Grade B	Grade C	Grade A	Grade B	Grade C	Grade A	Grade B	Grade C
January ..	1 2 9	1 2 9	1 2 10	1 2 27	1 3 0	1 3 2	1 3 20	1 3 20	1 3 20	2 0 5	2 0 6	2 0 6
February ..	1 2 8	1 2 8	1 2 10	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 20	2 0 6	2 0 6	2 0 6
March ..	1 2 8	1 2 9	1 2 9	1 2 25	1 2 27	1 3 1	1 3 19	1 3 20	1 3 21	2 0 5	2 0 6	2 0 6
April ..	1 2 8	1 2 8	1 2 8	1 2 25	1 2 27	1 3 0	1 3 20	1 3 20	1 3 20	2 0 6	2 0 6	2 0 6
May ..	1 2 8	1 2 8	1 2 9	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
June ..	1 2 8	1 2 8	1 2 8	1 2 27	1 3 2	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
July ..	1 2 8	1 2 10	1 2 10	1 2 26	1 3 0	1 3 2	1 3 20	1 3 21	1 3 21	2 0 6	2 0 6	2 0 7
August ..	1 2 9	1 2 9	1 2 10	1 2 25	1 2 27	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
September ..	1 2 9	1 2 10	1 2 10	1 2 25	1 2 27	1 3 1	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
October ..	1 2 9	1 2 10	1 2 10	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
November ..	1 2 9	1 2 9	1 2 9	1 2 26	1 3 1	1 3 2	1 3 20	1 3 21	1 3 21	2 0 6	2 0 6	2 0 6
December ..	1 2 9	1 2 9	1 2 10	1 2 27	1 3 1	1 3 3	1 3 20	1 3 21	1 3 21	2 0 5	2 0 6	2 0 7
Average for 1937	1 2 9	1 2 9	1 2 9	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 7
Average for 1936	—*			1 2 25	1 2 27	1 3 0½	1 3 20	1 3 20½	1 3 21	2 0 6	2 0 6¼	2 0 6¾
Average for 1935	—*			1 2 25½	1 2 27	1 3 0¼	1 3 20	1 3 20	1 3 20¾	2 0 6	2 0 6	2 0 7

*Figures are not available as in 1935 and 1936 the weight class was c.1.1.14 to c.1.2.14.

The figures generally indicate that within each weight range there is a relation between the weight and grade of carcase, the lighter pigs in each weight range grading out best.

CONCLUSIONS.

An examination of the results of the grading of roll and ham pig carcases during the past three years reveals the following points of interest:—

1. The average weight of carcases is lightest in the summer and heaviest in the autumn.

2. The quality of carcases, judged by fat measurements, is poorest in summer and best in the autumn.

3. In each weight class Grade A carcases average less in weight than Grade B or Grade C carcases.

EDUCATIONAL EXHIBIT.

As in previous years, the Ministry's Exhibit will be staged in the Central Exhibition Hall and Annexe at the Royal Ulster Agricultural Society's Show, which will be held at Balmoral on Wednesday, Thursday, Friday and Saturday, May 25th, 26th, 27th and 28th.

The principal exhibits will deal with the Land Fertility Scheme, field crops, live stock, poultry-keeping and egg marketing, dairying, horticulture, diseases and pests of crops and of livestock, forestry and farm accounts. In addition the type of instruction given at the Agricultural Colleges and Schools, and classes for young men and young women in Northern Ireland will also be demonstrated.

Land Fertility Scheme.—In view of the importance to agriculture of the Land Fertility Scheme under which supplies of lime and British basic slag can be obtained at reduced prices by farmers, the central exhibit in the main hall will deal with lime, and natural limestones will be shown. Information on how to take advantage of the Land Fertility Scheme, and on the use of lime and of slag, will be available at this stand.

Field Crops.—The essential interdependence of the three factors, soil fertility, seed quality and strain, and management, for the development and maintenance of good grass land will be shown in a comprehensive grassland exhibit. Representative turves will illustrate the several, and combined effects of these factors. Methods of examining and testing seeds will also be demonstrated.

The Plant Breeding Exhibit will display the various types of flax and cereal varieties under test at the moment, and will make a special feature of the results of past trials. In flax, strong emphasis will be laid upon the economic advantages of modern varieties, some of which show an increased crop value of as much as 57 per cent. over ordinary commercial strains.

The Potato Section will deal especially with the growing and management of seed potatoes for export. During recent years the prices obtained for seed potatoes of certain varieties which were well handled, have been encouraging, and the exhibit will show the best methods of cultivation and handling of the potato crops for seed purposes. In addition, growing plants and tubers of some of the more important new varieties of potatoes will be shown.

Livestock.—As usual the space in the Annexe to the Exhibition Hall will be occupied mostly with animals with which experiments have been carried out, or which show features of educational value. The economy of limiting the amount of meals consumed by pigs in the final stages of growth and the results from different methods of feeding the ration will be shown.

It is hoped to draw attention to the importance of retaining sires which have proved themselves to be breeders of stock which show desirable features.

Poultry-Keeping and Egg Marketing.—The poultry exhibit will illustrate the influence which the use of sound breeding stock has on the health of the birds of the succeeding generation. The importance of having birds on free range in portable houses which are moved frequently to fresh pasture will also be emphasised. The increasing tendency of pullets to come into lay too early is recognised, and the causes and effects of this problem will be shown and remedies suggested.

How to have two and three-year old breeding hens laying in early winter is another difficulty for which a solution will be suggested.

A section of this exhibit will also deal with the feeding of poultry, and information will be available on suitable rations to feed, and on purchasing and judging the value of the various meals in common use.

In the egg marketing section prominence will be given to the chief causes of the production of eggs of "second" quality, and information will be given on how the production of such eggs may be avoided. For the benefit of consumers, a method will be shown by which they can judge the freshness of an egg when it is broken out.

Demonstrations on the testing of eggs will be given at intervals in the Annexe to the main hall on the first three days of the Show. Each demonstration will last about two hours.

Dairying.—In the dairying exhibit special emphasis will be laid on the production of clean milk, and the essentials necessary to attain this end will be shown. Milk producers will also see the methods employed in the laboratory for testing milk samples. The high value of milk and milk products as a food for human beings will be illustrated, and suggestions will be made whereby consumption could be increased.

The butter marketing section of this exhibit will feature Ulster Creamery Butter of "Premium Grade".

HORTICULTURE.—The principal feature of the horticultural exhibit will be a series of demonstrations on the grading of apples and in packing them in British Standard Boxes. The advantages of the use of machinery for sizing apples prior to wrapping and packing will be fully explained, and apple growers will see the speed at which experienced packers can work.

Samples of apples grown in 1937, and kept in different types of stores, will be on view showing the effects of the different types of storage conditions.

Apple Scab disease and Capsid Bug are the two chief pests of apples in Northern Ireland. The control of these pests will be illustrated by specimen branches of apple trees which have received appropriate treatment.

The history of the apple industry in Northern Ireland during the last fourteen years, as reflected in the quantity of apples shipped annually, will be shown in tabular form on a large chart.

DISEASES AND PESTS OF CROPS AND OF LIVESTOCK.—The prevention of crop diseases by seed disinfection will form an interesting exhibit. Particular attention will be given to the disinfection of seed potatoes and to the dressing of seed oats for the prevention of diseases such as smut and leaf stripe.

The danger of continuous cropping with potatoes in the same soil, and the harmful effects of the Potato Eelworm which are encouraged by this practice, will be demonstrated in an exhibit of growing potato plants. Recommendations will be given for the prevention of this pest.

Another section of this exhibit will deal with two destructive pests of foreign origin—the Colorado Beetle and the Chrysanthemum Midge. The purpose of this exhibit is to acquaint the public with the means by which these pests may be recognised, and to stress the importance of preventing the establishment of these and other similar pests in this country.

The control of "Big Bud" of blackcurrant by spraying, and the destruction of slugs and snails will also be shown. Common diseases of glasshouse crops will also be displayed.

A stand will be devoted to the Ox-Warble Fly. The advantages to be derived from the compulsory dressing of cattle for the control of this pest will be indicated, and the terms of the Warble Fly Order will again be brought to the notice of farmers.

The Veterinary Research Exhibit will deal with the latest advances in Veterinary science. For the benefit of pig breeders, full particulars regarding

the cause, symptoms and control of Piglet Influenza will be given. This is a serious disease of pigs in Northern Ireland, and models of suitable houses for the prevention of this disease will be shown. The problem of sudden deaths in young lambs from 3 to 6 weeks old will be dealt with, and preventive measures will be suggested. Sterility in cattle and Anthrax disease, along with the common poultry diseases, will also be featured.

Forestry.—Every farmer realises the importance of having good stock-proof fences, but many hedges in Northern Ireland cannot be regarded as being satisfactory in this respect. An important feature of the forestry exhibit will deal with the "laying" of overgrown thorn hedges so as to form really good fences which will turn stock and also provide shelter. Actual hedges showing this simple and economical way of fencing will be shown.

An exhibit will also be staged in this section showing the size and age of the plants of the various species of forest trees which are available to farmers at reduced rates under the Ministry's Forestry Scheme. Full particulars of this Scheme will be available.

A summer house made entirely of Yew provides a further interesting exhibit.

Farm Accounts.—For a number of years the Ministry has conducted costings on several typical farms in Northern Ireland. Figures giving the annual expenditure and income from these farms will be shown; these will repay a careful study.

Copies of leaflets and other publications issued by the Ministry will be available at the leaflet stand in the hall.

His Majesty's Stationery Office and the British Broadcasting Corporation will also have stands in the hall.

The Exhibit will be open for inspection as follows :—

Wednesday, 25th May, from 10 a.m. to 6 p.m.

Thursday, 26th May, from 10 a.m. to 9-30 p.m.

Friday, 27th May, from 10 a.m. to 6 p.m.

Saturday, 28th May, from 10 a.m. to 6 p.m.

FERTILISERS AND FEEDING STUFFS ACT, 1926.

Acts of Parliament, as often as not, are regarded as necessary (or unnecessary) evils by the general public which sees in them only the means of prosecuting unfortunate offenders. For this reason, if for no other, it is desirable to point out that the Fertilisers and Feeding Stuffs Act is almost wholly designed for the protection of the farmer. The Act provides a safeguard for farmers when purchasing the feeding stuffs or manures described in the Act, inasmuch as a legal obligation is laid on sellers to give the buyer a statement, referred to in the Act as a statutory statement, giving—

(a) the name of the commodity,
(b) certain particulars as to its nature, substance and quality,
(c) in the case of a feeding stuff, the names of any ingredients such as husks, chaff, hulls, straw or sawdust, which may be present and which may reduce the feeding value.

Amongst the classes of fertilisers to which the Act applies are superphosphate, basic slag, muriate of potash, kainit, semsol, nitrates, sulphates of ammonia and potash, lime and compound fertilisers, whilst feeding stuffs include pollard, sharps, bran, flaked maize and various cakes and meals—fish, meat, linseed, cotton, palm nut, earth nut and soya bean, including compounds. The statutory statement indicating as it does the percentage constituents of the article he proposes to buy, enables the farmer to determine in advance the manurial or nutritive value of the article.

The statutory statement, which may be included in the invoice, or printed on the bag or label attached thereto, must be given by sellers in cases when the quantity purchased exceeds ½ cwt. Where the sale is ½ cwt. or less, no statutory statement is required provided the article is taken in the purchaser's presence from a parcel bearing a conspicuous label on which the prescribed particulars are marked. Similarly no statement is required when commodities are mixed at the purchaser's request before delivery.

In the event of a farmer suspecting that a meal which he has bought is not satisfactory, he may have a sample analysed for a fee of 2/6d. or thereabouts, and if results show that the statutory statement is incorrect he may take civil proceedings for compensation, as the statement is, in fact, a guarantee or warranty. The importance of obtaining at time of sale a statutory statement, where such is required by the Act, will thus be evident, as it is on such statement that civil proceedings would normally be based. Should a seller fail to give the necessary statement he renders himself liable to criminal proceedings. A further important point is that the sample must be taken by an Official Sampler within 14 days of delivery to the purchaser or receipt of the statutory statement, whichever date may be the later. No time should, therefore, be lost

in suspicious cases in communicating with the local Agricultural Instructor (who is an Official Sampler) or, if his address is not known, with the Ministry.

The Act further provides ground for civil action by a purchaser should it appear, from analysis or otherwise, that an article, sold as a feeding stuff, is unsuitable for use as such or that the composition of a fertiliser or feeding stuff sold under a "scheduled" name does not accord with the statutory definition of that name. Similarly, there is a case for civil action if there is evidence of incorrectness, not merely in a statutory statement but in any statement made in any written document as to the amount of the various ingredients in an article sold as a feeding stuff or fertiliser, or as to the fineness of grinding of the latter.

As might be assumed, it is not left entirely to the farmer to see that the quality of a manure or feeding stuff is in accordance with the statutory statement furnished by the vendor. Where, for instance, there is evidence of the presence of poisonous substances or deleterious ingredients, such as an excess of soluble salts or of sand, in a commodity offered for sale as cattle or poultry food, criminal proceedings may be taken by the Ministry. The Ministry keeps a constant watch on merchants, and by taking occasional samples, checks the quality of fertilisers and feeding stuffs sold in Northern Ireland. Nevertheless, from the aspect of obtaining redress for any loss sustained by the purchase of inferior commodities, responsibility lies solely with the purchaser, as any action the Ministry might be obliged to take would be in respect of a criminal offence, which even if successfully prosecuted would not in itself entitle the purchaser to compensation.

The question of compensation is important when one considers the large expenditure incurred by a farmer in purchasing feeding stuffs and manures, and it is equally important that farmers should know that their remedy against breach of warranty is in their own hands. Finally, it should be remembered that promptness of action is essential if the benefits of the Act are to be utilised.

One further word of warning is desirable. Whilst the Act affords protection to the farmer in respect of articles sold as food for cattle or poultry, it does not necessarily provide a safeguard against peddlers of commodities which are sold, not as foods, but as cattle medicines, salts or tonics. Whilst many such articles, if purchased from a reputable supplier, may be necessary and beneficial on occasion, it is important that farmers should be on their guard against itinerant vendors who make fantastic claims as to the efficacy of their wares, and often sell these at exorbitant prices bearing no relation to the real value of the article. Peddlers of this class have been active in recent months in certain parts of Northern Ireland, and several complaints in regard to their operations have reached the Ministry.

THE MANURING AND MANAGEMENT OF GRASSLAND.

Out of a total of approximately 3⅓ million acres of land in Northern Ireland over 2 million acres are under grass. This vast area of grassland is composed of pastures ranging in quality and productiveness from those which are very good to those which, in their present condition, are very poor. Many fields of pasture have deteriorated in quality and in stock-carrying capacity to a marked degree, and this has been due to the prevalence of the opinion which is held by many farmers that grassland does not require much attention and is capable of looking after itself. These same farmers pay special attention to the growing of such crops as potatoes, flax and oats; are most particular about the selection of the seed for these crops and provide the land with the manures necessary for the production of high yields of good quality, as well as ensuring that the cultivations required for satisfactory growth are given. Why, then, do farmers neglect their grassland and permit it to continue deteriorating in quality and productiveness, as it will and does if left to fend for itself? Largely because grass is not regarded as a crop but a natural product which appears and remains until the field is again broken up.

The deterioration in the quality of much of the grassland has resulted from a lack of appreciation by the farmer of the principles underlying the maintenance of quality and productiveness in a permanent crop, and of failing to realise that the stock grazing on the pasture are continually removing nutriments which feed the grass. This drain on the reserves of food is followed by a decrease in both the quantity and quality of the grass which, in turn, leads to a decrease in its stock-carrying capacity and fattening properties. It is thus seen that a starved pasture will starve stock, inasmuch as it is incapable of providing them with grass of full nutritional value, though it may appease their hunger.

In Northern Ireland, where the production of farm livestock is such an important and valuable part of the agricultural industry, good grass must be the foundation on which development both as regards stock population and quality of animals is built. Further, the climatic conditions which prevail here are favourable to the production of good grass and of good stock so, therefore, the climate and weather will be an aid in obtaining the full benefits from a suitable programme of pasture improvement.

Poor quality grass is a liability; it is wasteful of the area on which it is growing; it has a short season of production; it produces a low output; it is of low food value; it fails to support livestock fully, and it is a predisposing cause of certain deficiency ailments and maladies.

Good grass is one of the most valuable assets, not only to the individual farmer, but to the country as a whole. Grassland improvement, is, therefore, a task of national importance—a fact which the Government has appreciated by introducing the Land Fertility Scheme. Grassland improvement in the past has been practised by progressive farmers, and their experience shows clearly that proper attention to pasture is a paying proposition. More grass, better grass, early grass and late grass, more stock, better and healthier stock, less outlay on feeding stuffs and lowered costs of production are the benefits which result from grassland improvement.

FUNDAMENTAL CONSIDERATIONS.

(1) Grass is a crop, and as such it should be given the attention, manuring and management which are regarded as being necessary to ensure the successful production of any farm crop. Leaving a field of grass to look after itself is not grassland farming.

(2) The grass crop should be sown properly, and a suitable mixture of seeds used. It is impossible to correct mistakes made at the sowing stage by subsequent treatment. Every field which is being laid down to grass, and especially to permanent grass, should be given particular attention as regards seeding, manuring and management. Grass is not a short term crop like potatoes or oats, where mistakes and omissions will affect the results for one year only; it is a crop in which the mistakes made at, or even before, sowing time will be reflected in the results each year during which it exists; and if the mistakes lead to a reduction in the quantity and quality of the herbage this reduction is likely to increase rather than decrease with time. Full particulars of the methods recommended for the laying down of land to grass are given in Leaflet No. 40.

(3) Grassland largely is dependent on the farmer to make good the supplies of plant food which are taken from it by the stock which graze it. Young, growing animals require the very same materials for the building up of their bones and bodies as the grass requires for its sustenance. Milking cows, similarly, require the same land fertility materials, such as phosphates and lime, for the making of milk and the production of calves as does the grass. It is, therefore, seen that when livestock and whole milk are sold off the farm there goes with them a considerable proportion of the phosphates, lime and other nutrients, which were taken from the pasture. If this "robbing" of the pasture goes on without any effort being made to replenish the supplies in the soil it is obvious that a time will come when not only the pasture but the stock will suffer from poverty. Troubles like sterility in cows may have their origin in a deficiency of essential nutritive elements in the pasture. The policy of taking away and putting nothing back is extremely short-sighted, and can only result in the ultimate deterioration of both grass and stock.

METHODS OF IMPROVEMENT.

In any programme of grassland improvement the essentials are manuring, liming, drainage, cultivation, and management as regards the control of the grazing.

Manuring.—Suitable manuring is required not only to produce a full yield of herbage but to ensure having herbage of maximum feeding value. The manurial constituent which pastures most commonly need is phosphate, and a suitable dressing of a phosphatic manure will improve the majority of them. The phosphatic manures most suitable for application to grassland are basic slag, ground rock or mineral phosphates, (such as Gafsa rock phosphate), and Semsol.

Basic Slag.—The inception of the Land Fertility Scheme has given a fresh stimulus to the use of basic slag on agricultural land. Under this Scheme the price, to the user, of British-made basic slag is reduced by one quarter. Basic Slag is a by-product in the manufacture of steel from pig iron, and the percentage of phosphoric acid in it varies in accordance with the method of steel manufacture used. There are high grades and low grades, the grade being determined by the content of phosphoric acid. High grade slag, containing from 16 to 18 per cent. of phosphoric acid, is to be preferred to the lower grades, as it usually gives better results and supplies phosphoric acid at a cheaper rate although costing more per ton, than the lower grades.

The fineness of grinding of basic slag is very important—a coarsely-ground sample will not act either as quickly or as well as one that is finely ground. The standard for fineness of grinding commonly used is that 80 per cent. of the material should pass through a sieve having 100 meshes to the square inch. There is a small quantity of lime in basic slag, but it would not nearly be adequate to supply the needs of a field for lime, and a dressing of basic slag cannot, therefore, be regarded as fulfilling the requirements of both phosphate and lime.

Basic slag gives best results on the heavier and damper classes of soils, particularly if they are well supplied with organic matter, as is the case with peaty soils. As it is comparatively slow in action it should be applied during autumn or early winter after the pasture has been grazed bare, to give results during the succeeding grazing season. If not applied until the spring there will not be sufficient time before the arrival of the grazing season for the phosphate to be changed into the state in which it can be used by the plants and, accordingly, they will not obtain benefit from it until later. A dressing of from 6 to 8 cwt. per statute acre is recommended for application to grassland.

Rock Phosphates of several types are available, but North African or Gafsa rock phosphate is the type now commonly used in this country. This is made suitable as a fertiliser by grinding the natural rock very finely and, accordingly, the degree of fineness of grinding is of particular importance in the case of this manure. At least 80 per cent. of the bulk sample should pass through a "100 mesh" sieve.

Gafsa rock phosphate contains from 26 to 27 per cent. of phosphoric acid, and is, therefore, a richer source of phosphate than basic slag. It is, however, rather slower in action than basic slag, and should be applied during the autumn of the year previous to that in which results are required. Gafsa rock phosphate gives best results on medium to light soils which are inclined to be acid in nature. For that reason it would be a mistake to apply lime to a pasture shortly before applying Gafsa phosphate, and if the pasture requires both lime and phosphate it is best to apply the Gafsa rock phosphate in the autumn of one year and the lime in the autumn of the following year. The usual rate of application recommended for Gafsa rock phosphate is from 6 to 8 cwt. per statute acre. If the land is particularly deficient in phosphate an even heavier dressing than 8 cwt. per acre may be justified.

Semsol is the trade name of a phosphatic manure composed of equal parts of ground rock phosphate and superphosphate. Since superphosphate contains soluble phosphoric acid, Semsol is quicker in action than either basic slag or Gafsa rock phosphate, and is, accordingly, suitable for spring applications. Its total phosphoric acid content is about 20½ per cent., and it has given best results on soils of a medium or light type. The rate of application is the same as for basic slag and Gafsa rock phosphate.

Potash is necessary in addition to phosphate on all but the heavier types of soils, to obtain the full benefits from manuring. Of the potash manures suitable for grassland "Thirty per cent. Potash Salts" is the best value for money, as at the prices prevailing it supplies potash at a cheaper rate than the lower grades of potash manures, such as kainit, although costing more per ton. When it is considered, however, that it contains more than twice as much potash as 14 per cent. kainit it is cheaper per unit of potash than the latter if it costs even twice as much per ton, and 1 ton will be sufficient to dress more land than 2 tons of kainit. A dressing of 1 cwt. per acre of 30 per cent. potash salts in addition to the phosphatic manure is recommended. The two manures can be mixed together and applied at the same time. Potash improves the quality of the pasture and appears to make the herbage more palatable to stock, thus encouraging the animals to graze more closely.

Nitrogenous Manures are not in the strict sense improvers of pastures, and if used in the absence of adequate dressings of phosphates, potash and lime may actually do harm. If, however, early grass, or an extension of the

grazing period into late autumn, is required and the field is well provided with phosphates, potash and lime, a light dressing of sulphate of ammonia or of nitro-chalk may be justified. Not more than 1 cwt. of either manure should be applied per acre. For early grass the application can be made in March or the beginning of April.

It should be remembered that if a pasture is in good condition, and the herbage contains a reasonable proportion of clover plants, its requirements as regards nitrogen will be largely met from the nitrogen collected from the air by the clovers.

Liming.—The liming of land is dealt with fully in Leaflet No. 84, "Lime and Liming," copies of which can be obtained free, on request, from the Ministry. As previously pointed out, it is not desirable to apply both lime and insoluble phosphates, such as Gafsa rock phosphate, at the same time, as the lime will prevent the phosphate from producing full results. In any scheme of grassland improvement it will be necessary to apply both lime and phosphates, unless the land was limed during the rotation of crops preceding the laying out of the field to pasture. In the majority of cases where there is a thick mat of old grass on pasture fields it may be assumed that lime is necessary, for if the soil is well supplied with lime and the field grazed properly, a mat will not appear. A suitable dressing of burnt lime for grassland is from 1 to 2 tons per statute acre; if ground limestone is being used, from $1\frac{3}{4}$ to $3\frac{1}{2}$ tons per acre will be necessary to provide the equivalent dressing. Lime should not be spread on grassland during wet weather, or on top of a thick mat of grass (see under "Cultivation"). The best time to apply lime to grassland is in the autumn.

Drainage.—It would be futile to attempt to improve grassland by manuring and liming if the soil is in need of drainage, and, unfortunately, drainage is necessary in many permanent pastures. Water-logged soils produce herbage of poor quality and are, moreover, associated with such diseases of livestock as "fluke", "hoose" and "red-water". It is almost impossible, moreover, to suppress the growth of rushes if pastures are water-logged.

It is realised that the systematic underground drainage of land is an expensive undertaking, but now that there is a Scheme under which substantial grants are made for such work, the question of expense is not such a hindrance to drainage as it was formerly. Full particulars of this Scheme may be had from the Ministry, on request.

Even though a thorough system of drainage is not possible, much improvement can be effected by the cleaning out of ditches, and by keeping drain outfalls clear so that the drainage water may run away freely. On marshy land, the cutting of shallow, open drains about 5 yards apart will result in considerable improvement. This work can be conveniently carried out during slack periods in late autumn and early winter.

Destruction of Rushes.—It is unfortunately the case that many fields of grassland are infested with rushes and that the infestation has extended during recent years. There seems to be no reason why this extension of the rush pest should not be checked immediately. Rushes are moisture and acid-loving weeds which will not thrive in well-drained, well-limed and properly managed grassland.

The first step in ridding a pasture of rushes is to drain it if drainage is required, the second, close cutting of the rushes, the third, an application of phosphates and the fourth a dressing of lime. It is well known that rushes will appear in grassland where the soil is not in need of drainage and in such cases it has been found that close cutting during the autumn, followed immediately by a dressing of phosphatic manure, further cutting during June and September of the following year, and cutting once annually during subsequent years will practically rid a field of rushes. A dressing of lime during the autumn of the year following that in which the phosphate was applied will assist further in the eradication of these weeds. It is essential that the annual cutting should be done not later than June, so as to prevent seeding, which is the normal method by which the pest is spread.

Cultivation.—As already pointed out, an important factor in grassland improvement is mechanical cultivation, the object of which is to aerate the soil, remove the mat of old grass and fog and thus enable the manure or lime to come into direct contact with the soil. Grassland which is in need of lime or which has not been grazed properly will have a thick mat of old grass on the surface of the soil. This mat not only prevents air and moisture from reaching the roots of the plants but also makes it impossible for dressings of manure or lime to become incorporated with the soil. It is thus seen that improvement from manure and lime cannot be obtained unless the mat is first torn up thoroughly. This tearing up of the surface also has a further beneficial effect on the pasture, as it encourages the plants to produce fresh shoots and new succulent growth.

There are on the market several satisfactory types of grass harrows specially designed for grassland cultivation. If, however, a farmer does not wish to incur the expense of obtaining a special implement for the purpose, the cultivation of grassland can be carried out quite efficiently with disc harrows or with well-sharpened, straight-tined zig-zag harrows. The harrowing must, however, be done THOROUGHLY in lengthwise, crosswise and anglewise directions. A properly harrowed field of grass will have a "red" rather than a green appearance. If there is a very extensive accumulation of old "fog", it may be necessary to remove some of it by raking in order to complete the harrowing process properly. If rushes are present they should be cut closely to the ground before harrowing begins.

MANAGEMENT OF PASTURES.

While drainage, manuring, liming and cultivation are the chief factors which contribute to the production of first-class pasture, the good effects of these measures will be nullified to a marked extent unless the subsequent management as regards stocking and grazing is properly planned.

The pasture should be grazed well with mixed stock, but if it is found that the stock available cannot keep the grass in check a field should be closed up and a crop of hay taken. It is a much sounder practice to take a crop of good nutritious hay for winter feeding than to allow the grass to run to seed in the hope of providing winter keep for grazing stock. Good hay is much superior in feeding value to rough, withered grass. Furthermore, grass which is allowed to shoot and seed encourages the propagation of such pests as wireworms, leather-jacket grubs, and cattle ticks which carry "red water" disease.

Even when grassland is kept well stocked, tufts of coarse grass will frequently develop, particularly in the vicinity of manure droppings. In such cases a run of the mower will prove very beneficial by cutting off coarse patches, destroying weeds and allowing fine, bottom grasses to develop. The mower is one of the most useful implements for maintaining grassland in good condition, and as practically all farmers have one of these implements the opportunity of using it for this work should be taken.

The treatment outlined in this leaflet is not expensive and is within the reach of all farmers. Money spent on improvement of pasture will give a much greater return in the production of natural food for stock than a similar amount expended on the purchase of feeding stuffs. It is now well known that it is more economical to provide extra protein and minerals through the medium of high class grazing than by feeding purchased cakes and meals to supplement poor grass. The general health, condition and productiveness of stock will also be greatly improved and, at the same time, the fertility of the land will be maintained at a high level.

SUMMARY.

A programme of grassland improvement should take into account all the factors which influence the fertility of the soil and as a consequence the production of more and better grass. These factors are as follows:—

Temporary Pasture.

Ground well cleaned and limed before sowing down the field to hay and pasture.

Suitable seeds mixture which includes the seeds of permanent grasses and clovers—See Leaflet No. 40.

Manuring of the young "seeds" with phosphates, plus potash on the lighter soils.

If possible, the taking of only one crop of hay.

Permanent Pasture.

Proper drainage.

Cutting of rushes, if present.

Cultivation to tear up old mat so as to enable manures and lime to act properly.

Manuring with phosphates in autumn, plus potash on the lighter soils.

Dressing of lime in the autumn of the year following that in which the phosphate was applied.

Grazing with mixed stock and grazing heavily so as to prevent the plants from shooting and producing seed; also to discourage the formation of a mat of unpalatable herbage which in turn will prevent fresh growth in the succeeding year.

Mowing of shot grass with the mower each summer.

Surface harrowing with a light harrow in autumn and again in spring to spread the manure dropped by grazing animals.

Rolling during dry weather in spring to consolidate the soil.

Applications of manures and lime periodically to maintain tone and quality in the pasture.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR MAY, 1938.

The following announcement has been made by the Pig Industry Council.

Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in May, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	67/6	64/6	61/6	57/6	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	71/6	68/6	65/6	61/6	
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.14	71/6	68/6	65/6	62/6	
c.1.2.15 to c.1.3.14	71/6	68/6	65/6	62/6	
c.1.3.15 to c.2.0.0	68/6	65/6	62/6	59/6	
c.2.0.1 to c.2.0.14	62/6	59/6	56/6	53/6	

Pig Carcases c.1.0.0 to c.1.0.20:—64/6

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs, smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of May, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	77/6	74/6	71/6	67/6	64/6
c.1.1.14 to c.1.2.3	77/6	74/6	71/6	67/6	64/6
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	74/6	71/6	68/6		65/6
c.1.0.0 to c.1.0.20	Suitable 66/6		Unsuitable 64/6		
Over c.1.2.7	On the same basis as pigs sold dead.				

Prices for Live Pigs Sold to the Pigs Marketing Board (Northern Ireland).

In the case of pigs sold alive to the Pigs Marketing Board during May, 1938, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	50/–	50/–	50/–	48/6
c.1.2.14 to c.2.0.0	58/3	56/–	53/9	U.L. or U.F. 50/9 48/6
c.2.0.1 to c.2.1.14	53/9	51/6	49/3	47/–
c.2.1.15 to c.2.2.7	51/6	49/3	47/–	44/9
c.2.2.8 to c.2.2.21	47/–	44/9	42/6	40/3

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 1/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 23rd April, was 10/2¾d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based :—

Maize Meal	30%
Barley Meal	30%
White Pollards	20%
White Bran	10%
Meat Meal (60% Protein)	10%

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary of payments made under these Acts up to and including 23rd April, 1938.

Live Weight ..	*Number of Animals*	*Total Amount paid* £ s. d.
England and Wales ..	.. 4,010,218	9,621,141 19 7
Scotland	.. 1,218,283	3,089,506 7 10
Northern Ireland ..	.. 426,203	892,572 7 9
Total (United Kingdom)	.. 5,654,704	13,603,220 15 2
Dead Weight		
England and Wales ..	.. 129,335	324,815 8 8
Scotland ..	.. 37,465	104,352 1 1
Total (Great Britain)	.. 166,800	429,167 9 9

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy, published by the Livestock Commission in respect of the month of March, 1938, are shown hereunder:—

	March, 1938.					Corresponding totals in	
	Home-bred		Imported				
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade	Total	March, 1937.	March, 1936.
England ..	28,783	33,049	7,530	14,327	83,689	97,789	98,482
Wales ..	3,424	1,539	49	62	5,074	6,736	7,659
Scotland ..	2,928	16,740	902	10,935	31,505	36,362	34,724
Northern Ireland	7,416	1,268	513	164	9,361	12,865	12,969
United Kingdom	42,551	52,596	8,994	25,488	129,629	153,752	153,834

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week and the figures for each calendar month are adjusted accordingly, so as to allow as far as possble for the fact that a large number of markets are held on Mondays, and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for March, 1938, 1937 and 1936 are 124,942, 139,494 and 143,732 respectively.

The average prices per live cwt. of certified cattle in March, 1938, were:—

	March, 1938.			Corresponding averages in	
	Ordinary Grade	Quality Grade	Average	March, 1937	March, 1936
	s. d.	s. d.	s. d.	s. d.	s. d.
England ..	41 5	44 2	43 0	——	——
Wales ..	42 9	45 5	43 8	——	——
England and Wales	41 6	44 2	43 0	36 11	34 3
Scotland ..	40 11	44 3	43 11	38 3	35 5
Northern Ireland ..	39 7	40 9	39 9	33 4	31 4
United Kingdom ..	41 3	44 2	43 0	36 11	34 4

OATS AND BARLEY SUBSIDY SCHEME.

The Ministry of Agriculture and Fisheries issued the following statement concerning this Scheme, on 29th April:—

"Under Part II. of the Agricultural Act, 1937, the Minister of Agriculture and Fisheries, as regards England and Wales and Northern Ireland, and the Department of Agriculture for Scotland, as regards Scotland, are empowered to pay in respect of the five years 1937 to 1941 subsidy payments to growers of oats or barley in any cereal year when the average price of oats during the seven months September to March is 7/7d. per cwt. or less.

By the Home Grown Oats (Ascertained United Kingdom Price) Order, 1938, dated 29th April, 1938, the average price of oats in the United Kingdom for the seven months ended 31st March, 1938, has been declared by the Ministers concerned to be 7/7d. per cwt. In consequence of this determination, subsidy at the rate of 2/6d. per acre will be payable to those growers whose applications were made in accordance with the regulations and have been accepted."

The issue of Payable Orders commenced at the beginning of May, and will extend over a period of about seven weeks.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

Mangels, Cabbage and Kale.—It is not yet too late to sow a small area of mangels, cabbage and kale, which, as mentioned in last month's Report, are valuable supplements to the turnip crop for stock feeding. Cabbage and kale are particularly useful for the supplying of succulent green food to dairy cows in autumn and early winter and are keenly relished by all classes of stock. Mangels, on the other hand, being a good keeping crop, have especial value in late spring, when the supply of turnips is running low.

To obtain reasonably good results, the sowing of these crops, if not already done, should be carried out without delay. In the case of mangels, the steeping of the seed in water for about 24 hours before sowing will encourage quicker brairding. The Red Intermediate type of mangel has proved very satisfactory for average conditions in Northern Ireland, and in the case of cabbage, the Early Drumhead variety is recommended for farm use.

It should be remembered that mangels, cabbage and kale require liberal manuring if the best results are to be obtained. Suitable manurial treatment for each crop was given in last month's Report, and is also obtainable from Leaflet No. 44.

Turnips.—Where the land is in reasonably good condition, the sowing of turnips should be done as soon as possible; this work has already been considerably delayed, particularly in the earlier districts, by the period of abnormally dry weather.

As weather conditions during the present season have been favourable to the development of the turnip "fly", every assistance should be given to the crop in the seedling stage to hurry the plants through the period when they are most susceptible to attack. The turnips should, therefore, be sown in clean, well-tilled land which has not been allowed to become too dry during cultivation, and for the latter reason, no more drills should be opened than can be manured, closed and sown on the same day. This will materially assist in ensuring a good strong braird, and has the added advantage that the different sowings will reach the singling or thinning stage at different periods, thus simplifying the labour problem.

Where a moderate dressing of farmyard manure is available, the application of from 4 to 6 cwt. per statute acre of a phosphatic manure such as super-phosphate, Semsol, high-grade basic slag, or Gafsa rock phosphate is generally an adequate dressing of artificial manure for turnips. Phosphatic manures are of particular value for this crop in that they promote root development, and, therefore, the artificial manure is best applied on top of

the farmyard manure in the drills, so that it may readily be reached by the roots of the young plants. If farmyard manure is not available, a suitable manurial dressing is composed of from 1 to 1½ cwt. sulphate of ammonia with from 1½ to 2 cwt. 30 per cent. potash salts per acre, in addition to 6 cwt. of a phosphatic manure.

On land subject to "finger and toe" disease, farmyard manure produced by stock which had been fed on affected roots should not be applied, as this might only spread the infection. On such land basic slag or Gafsa rock phosphate should be used in preference to other sources of phosphates, but in the case of basic slag, it must be noted that this manure should not be mixed with sulphate of ammonia. The two must be applied separately, otherwise loss of the fertilising properties of the sulphate of ammonia will occur.

Useful information regarding the most suitable varieties for any district can be obtained from the Agricultural Instructor for the area.

Oats.—Attention is again drawn to the necessity, mentioned in last month's Report, of keeping a close watch on the brairds for evidence of attack by leather-jacket grubs. Where attack is suspected, immediate application of a Paris Green and bran bait should be made before any further damage can be caused by the pest. Further particulars on the control of leather-jacket grubs are given in Leaflet No. 22.

If attacks by wireworms are feared, the braird should be heavily rolled, and if the soil is in poor condition, it should receive a light application, up to 1 cwt. per statute acre, of a nitrogenous manure to assist the growth of the oats past the danger stage for wireworm damage. In this case, the Paris Green and bran bait is ineffective, as the wireworms live and feed well below the surface of the ground, and, therefore, do not reach the poison. Care must be taken, however, to avoid an excessive application of the nitrogenous manure, otherwise there may be a tendency for the crop to lodge later in the season.

Destruction of Charlock.—Much of the loss caused by the smothering effect of charlock or "preshaugh" on the oat and flax crops can easily be avoided by spraying with a solution of copper sulphate (bluestone) before the weeds reach the flowering stage. The operation should be carried out as soon as the young charlock plants, which are very similar in appearance to young turnips, are seen to be present to any extent in either the oat or the flax crop, and, consequently, it is advantageous for farmers to watch for and identify the weed at this stage. It is unwise to delay spraying until the charlock is in bloom, although even at that stage spraying will give fairly good results.

For charlock in oats, a 3 per cent. solution (12 lb. copper sulphate to 40 gallons water) is of suitable strength, while for flax a 2½ per cent. solution (10 lb. copper sulphate to 40 gallons water) has given good results. On poor brairds, or where charlock has hampered the growth of the crop, the addition of 2 stones nitrate of soda to each 40 gallons of solution helps to stimulate the crop.

Pastures.—Mixed grazing with different classes of farm stock will result in better value being obtained from the pastures, as this type of grazing will generally mean more thorough cleaning up of all the grasses and clovers, and eliminate the tuftiness which arises where only one type of stock is grazed on the land. Moreover, mixed grazing will assist in the maintenance of a better balance of the different grasses and clovers in the pasture, as any one or two species are prevented from becoming dominant to the detriment of the other types present.

SEASONAL LIVESTOCK NOTES.

Ox Warble Fly.—In order to comply with the terms of the Ox Warble Fly Order, the third dressing of infested cattle should have been carried out between the 10th and 17th May, while the fourth and final dressing should be done between the 7th and 14th June. Strict compliance with the terms of the Order will ultimately lead to the extinction of the pest, and farmers are, therefore, urged to carry out the specified dressings in a thorough manner. Supplies of the recommended Derris materials are obtainable from most chemists, and from those who sell sheep dips, and the wash should be made up in the proportions recommended by the manufacturers.

Feeding of Cattle on Grass.—As young grass is rich in protein matter, the feeding of a protein supplement to cattle that are being fattened on grass is unnecessary and wasteful. An allowance of maize meal, flaked maize, or crushed oats, or a mixture of these, will supply the extra food material necessary, and it is, therefore, inadvisable to feed expensive cakes or meals rich in protein at this stage.

In the case of the average dairy cow, good grass at this period of the year provides sufficient food material for a moderate milker, and it is only in the case of heavy milkers, or where pasture is of poor quality, that there should be any necessity to feed concentrates.

Care should be taken to see that an adequate water supply is at all times available for stock on pasture throughout the summer months.

Calf-Rearing.—Purchasers of newly-dropped calves should exercise particular care in the feeding of these animals during the first week or two, as the calves are often subject to digestive troubles at this stage. It is better to under-feed than over-feed, and a dose of from ½ to ¾ ounce of castor oil may with advantage be given to the calf with the first feed. Useful hints on the subject are given in Leaflet No. 54.

Breeding Bulls.—In order to maintain bulls in a good fit condition, they should be given ample exercise. If possible, they should be allowed out to grass during the summer months, but it is advisable in addition to feed an allowance of a mixture of equal parts crushed oats, bran and maize meal.

Pigs.—Sows and gilts will benefit from a daily run on pasture, and they should be out as much as possible for the next few months. Not only does this treatment keep the animals in good health, but it results in a considerable saving in the amount paid out for feeding stuffs.

Sheep.—The sheep of lowland breeds will be ready for clipping in the course of the next few weeks, and in carrying out this operation, care should be taken to avoid injury to the fleece or discomfort to the sheep. For the latter reason, it is advisable to put the sheep on the barest pasture available during the night before clipping in order to avoid the risk of handling and turning over the sheep when they have full stomachs.

Clipping should be carried out only when the fleece is absolutely dry, and should be done on a door or a sheet to prevent foreign materials from getting into the wool. When shorn, the fleece should be spread out, all dirty locks should be removed, and finally the edges should be folded over lengthwise, and the fleece carefully rolled from the tail towards the head, using the neck end as a band to tie the rolled-up fleece. Binder twine or string should not be used for tying. All loose locks of wool or broken fleeces should be marketed separately, as they may only be the means of causing reduced offers for the sound fleeces.

It should be noted that the fleeces of lowland breeds ought to be rolled with the inside out, and those of mountain sheep "outside out". Further information on clipping and the handling and care of wool is given in Leaflet No. 23.

SEASONAL GARDEN AND ORCHARD NOTES

The Spraying of Apple Trees.—Spraying with Bordeaux Mixture should be carried out at intervals of from 14 to 21 days until the middle of July on trees of such varieties as Bramley's Seedling, Newton Wonder and Lanes' Prince Albert to protect the recently produced foliage and also the fruit from attacks by apple scab disease. It has been shown recently that if the trees are kept free from infection during the summer and autumn the disease will not develop nearly to the same extent the following season as it will if sprayings during May, June and July of the previous year are not carried out. Such varieties as Grenadier, Royal Codlin, and Royal Jubilee, which are not subject to severe attack by apple scab disease, need not be sprayed after petal fall.

The Bordeaux mixture for use from now onwards on apple trees should not contain more than 1 lb. of copper sulphate (bluestone) in 40 gallons of water. If hydrated lime is used, from 4½ to 6 lb. will be necessary for each 40 gallons of the mixture, while if lime putty is the form of lime selected 8 lb. will be required.

In many orchards apple aphides have become very prevalent following the spell of fine weather and these pests should be destroyed before they have had time to cause curling of the foliage. The best method of destroying aphides is to spray the infested trees with a nicotine or nicotine sulphate and soft soap wash, but if spraying is delayed until after curling of the foliage has been caused the difficulty of killing the pests will be increased owing to the fact that they are better protected by the curled leaves and the chances of the spray coming into contact with them are lessened. As soon, therefore, as the aphides are seen on the trees spraying should be carried out. A suitable strength of wash is made by adding 6 fluid ounces of nicotine or 8 fluid ounces of nicotine sulphate to 40 gallons of water to which 4 lb. of soft soap or other spreader, of which there are several proprietary brands on the market, has been added. The most satisfactory plan is to add the nicotine or nicotine sulphate to the Bordeaux mixture and thus kill the aphides as well as prevent apple scab disease. Soap or other spreader should not be added to the Bordeaux mixture.

The Grafting of Apple Trees.—Any scions which were put on during recent weeks should be examined immediately and any cracks which may have appeared in the material covering the graft should be closed to prevent the air from reaching the point of union between scion and stock. Any adventitious shoots which may have appeared on the stock should be removed by pulling in a downward direction. This is a better method of removing such shoots than cutting them off as all the basal buds will likely be removed with the shoot and thus the development of further shoots at these points will be prevented.

Strawberries.—The strawing of the beds, if not already done, should be carried out immediately. Few commercial growers of strawberries in this country adopt this practice, which is well worth while and usually pays handsomely for the material and labour involved. In seasons when unsuitable climatic conditions prevail during the period the fruit is ripening, the loss of berries will be very heavy if they are lying on the surface of the soil, and the object of strawing the beds is to provide a suitable "carpet" for the developing berries and thus to keep them clean, sound and fresh.

If the straw is spread around the plants before the fruit sets, the process of strawing the beds is a comparatively simple one, but if the operation is postponed until later and the fruit has set, each truss of fruit will have to be lifted and the straw placed underneath. Early strawing of the beds is,

therefore, recommended. If the straw is chopped into short lengths, the spreading of it around the plants will be made even less difficult.

The plantation should be given the final hoeing for the season before the straw is laid and if the dressing of straw advised, namely 30 cwt. to the acre, is put on it will keep weeds well in check until after the fruit has been gathered.

Raspberries, Currants and Gooseberries.—These will benefit considerably if the soil in which they are growing is mulched during the summer months with straw, lawn grass cuttings or other decaying vegetable matter. This mulching assists in conserving the moisture in the neighbourhood of the roots of the plants and also helps to check the growth of weeds.

Vegetables. To keep up a supply of lettuce, peas and dwarf beans successional sowings should be made at suitable intervals. The last sowing of peas and of dwarf beans should be made during the last week of May and an early variety of pea should be chosen for this sowing.

Celery which was sown in a hot bed in March should soon be ready for planting out in the position in which it is to mature. In its natural environment, celery is a swamp-loving plant and requires plenty of moisture and organic matter for sucessful cultivation in the garden. Celery is usually grown in a trench made about 12 inches wide and from 9 to 12 inches deep. A liberal quantity of farmyard manure or decaying vegetable matter should be incorporated with the soil in the bottom of the trench and the plants set out in either one or two lines allowing 9 inches between them in the row or rows. If set out in two rows, the plants in one row should be opposite the spaces between the plants in the other row.

Preparations should now be made for the planting out of Brussels sprouts, broccoli, autumn cauliflowers, autumn cabbage, savoys and borecole. For the successful cultivation of Brussels sprouts and broccoli the ground in which the plants are set should be made firm. All these vegetables are subject to attack by "finger and toe" disease, which causes large, uneven lumps to develop on the roots of the plants and leads to the death of many of them. The disease thrives only in sour soil, and if it has appeared on plants of the cabbage family grown in the same soil in previous years steps should be taken to prevent its appearance in this season's crops.

On land subject to attacks of this disease, liming, to neutralise the acidity in the soil, should be carried out. A dressing of freshly burnt lime at the rate of about 2 tons per statute acre (1 lb. per square yard) should be applied during autumn or early winter after the ground has been ploughed or dug. The lime should be lightly worked into the soil. The application thereafter of additional lighter dressings of lime at the rate of about 1 ton per acre ($\frac{1}{2}$ lb. per square yard) for two or three years in succession is recommended.

While the liming of infected ground improves soil conditions it may not give immediate control of the disease. Recent experiments have shown however that the treating of the ground around the plants with a solution of mercuric chloride (corrosive sublimate) enables a crop to be grown on infected land, but that such treatment, although it gives complete control of the disease for one season, is not a preventive of future attacks. The solution is made up by dissolving one ounce of mercuric chloride in from 8 to 10 gallons of water. It is best to melt the material in about one quart of hot water and to add sufficient cold water to make the solution up to the required bulk when the mercuric chloride has completely dissolved. Sufficient of this solution (approximately half a pint), to saturate the soil in the immediate vicinity of the plant, should be poured around each at the time of planting out.

As mercuric chloride is extremely poisonous the utmost care is necessary in its use. The solution, which should be made up in a wooden, earthenware, or glass vessel and applied with a cup or glass, should not be left where stock of any kind have access to it. The vessels used in its preparation and application should either be destroyed after use or washed thoroughly before being used for any other purpose. If washed, the washing water should not be thrown out where stock may have access to it.

On land subject to attacks, it is an advantage not to grow cabbages and other related crops in the same piece of ground in successive years. A rotation of crops, that is the growing of a crop of a particular class after one of another class, not only aids in preventing diseases and insect pests but also enables a greater use to be made of the manurial reserves in the soil, since the manurial requirements of the different classes of crops are not alike.

Manure from stock fed on diseased roots should not be used for the growing of vegetables, as such manure is nearly certain to contain the "seeds" of the disease and will contaminate the ground for future crops of the cabbage family, even though it is used in the first instance for a crop which is not subject to the disease.

Carrot Root Fly.—This pest is becoming very prevalent in gardens in which carrots are grown regularly. The best method of preventing serious attacks is to sow the seed very thinly in the drills so as to make it unnecessary to thin out the plants in the rows, and as soon as the plants are well brairded to scatter crude naphthalene along the tops of the drills at the rate of 1 cwt. per acre, followed by further similar dressings at weekly intervals until the end of July. This pest is very often the cause of parsley failing to grow and it may also cause damage to crops of celery and parsnips.

Flowers.—Half hardy flowering plants such as Asters, Dahlias, Geraniums, Marigolds, Nemesias and Salpiglossis should be gradually hardened off and planted out during the last week of May and the first week of June, in the positions in which the plants are to flower during the summer. If the weather is dry it will be necessary to give the soil repeated waterings until the plants have established themselves and are growing freely.

SEASONAL POULTRY-KEEPING NOTES.

Care of Eggs.—In view of the deductions which are now made from the standard fixed price for eggs, where the eggs are found to be "seconds", it is important that precautions should be taken at all times, but particularly during the summer months, to avoid subjecting the eggs to any treatment which is likely to impair their quality. The principal precautions necessary are by no means elaborate or difficult to carry out, the main features being removal of broody hens from the nests, separation of the male birds from the laying hens, frequent collection of the eggs from the nests and the storage of the eggs under proper conditions.

The separation of the male birds from the laying hens is particularly important, as fertile eggs deteriorate in quality very rapidly. The male birds should, therefore, be removed from the pens as soon as they are no longer required for breeding purposes. Only those males which are wanted for next season's breeding should be retained; all others should be disposed of immediately.

Permitting broody hens to sit on the nests is bad, both as regards the quality of the eggs and the profits to be obtained. These birds should be removed from the flock as soon as they show signs of broodiness and fed well in a broody coop so as to encourage them to begin laying again.

In many cases, sufficient attention is not given to the conditions under which eggs are stored before being marketed. The room where they are kept should above all be cool and fresh, and free from odours of any description. Further details regarding the precautions which are necessary to prevent eggs from being classed as "seconds" are given in Leaflet No. 56 and "Talks to Producers" No. 39.

Management of Growing Pullets.—The growing pullets should be treated in such a manner as to ensure a very gradual but steady development towards maturity. On no account should they be rushed by the feeding of forcing rations. The ideal method of rearing growing pullets is in a moveable house of the ark type on free range, the birds by this method being ensured of fresh ground each time the house is moved, which should be twice weekly at least. The cleanest and freshest pasture field on the farm should be used for the growing pullets. A suitable meal mixture for feeding at this stage was given in last month's Report. An ample supply of drinking water should always be provided.

Culling of Pullets.—Watch should constantly be kept, even at this early stage, for weak or unthrifty birds amongst the growing flock, and any pullets of this type culled immediately and fattened off. It is most unlikely that such birds, even if they live to reach the laying stage, will ever be profitable, and there is always the risk that they will be the means of spreading disease amongst the flock. Culling should, therefore, commence early, and be continued right through the year.

Feeding of Laying Hens.—Where laying hens are on free range, the proportion of protein foods in the mash may now be reduced to about 5 per cent. without affecting to any extent the egg production of the flock. The reduction will cheapen the price of the mixture considerably. If separated milk is available, there is no necessity to include any protein foods in the mash.

Rearing of Turkeys.—Young turkeys should be reared on clean, fresh ground in order to lessen the risk of infestation with the common parasitic diseases. They thrive best when they obtain an ample supply of green food, and consequently they should be allowed out on free range after the first week. Care must be taken, however, to prevent the birds getting wet during rainy weather and they should be kept off the pasture while it is wet. Useful general information on rearing and feeding is given in Leaflet No. 37.

THE GROWING OF PERPETUAL KALE

The Growing of Perpetual Kale.—For providing green food for poultry during the winter months a small plot of perpetual kale will be very useful. This plant is a gross feeder so that the ground devoted to its cultivation should be heavily manured. Propagation is by means of cuttings, 8 inches to 12 inches long, taken in April-May. These are usually made from the side-shoots of the old plants. The cuttings may be planted directly into the open ground at 2 feet apart each way or in rows $2\frac{1}{2}$ feet apart and $1\frac{1}{2}$ feet from plant to plant in the rows. Should the ground not be ready for the reception of the cuttings they can be rooted in a nursery bed and then transplanted out later. Deep and firm planting is recommended. Sometimes three cuttings are inserted in one hole to establish a bed for smothering weeds on dirty land. As soon as the new bed is growing well pinch out the tops then top dress with manure and earth up. Gather the crop by cutting off the top foliage but leave a good stump with some leaves attached for the next crop to grow on. The plants will crop for two years provided that during the spring of the year following the establishing of the plantation it receives a good dressing of manure. The Ministry will advise on request as regards sources from which cuttings may be obtained.

THE POTATO MARKET SITUATION

As the result of the rather sudden turn for the better which was experienced in the demand for potatoes towards the end of April growers in Northern Ireland have been able to dispose of their surplus stocks more readily and at much better prices than have been obtained this season. From all accounts there are still considerable stocks of good quality ware potatoes in Northern Ireland to meet requirements and even at this late hour last season's crop may yet bring a fair return to the farmer. It is thought that the improvement in trade of late has been due, to some extent, to the effects on growing crops of the unusually long period of drought and to the accompanying cool day temperatures and sharp ground frosts, but the primary reason appears to have been the effects of the colder weather on the consumption of this product. This was reflected firstly at local markets where heavier buyings caused prices to rise. Later the wholesale markets in Great Britain became affected and within the past three weeks quotations in all districts have recorded upward movements.

The quantitative regulation of imports, together with the buying up of surplus stocks by the Potato Marketing Board in Great Britain has helped to ease the situation from time to time during past months, and in regard to imports it is interesting to note that only 7,100 tons were imported during the month of March last as compared with 15,000 tons for the corresponding month a year earlier. Further, the total imports for the first three months of this year amounted to only 12,300 tons as against 40,000 tons for the similar period of 1937, and 26,000 tons the average quantity for the first quarter of the five years 1933-1937. According to recent estimates the stocks of potatoes remaining on farms in England and Wales at the beginning of April amounted to 539,000 tons or 17 per cent. of the total production for the year 1937. This quantity is, moreover, 133,000 tons greater than the stocks at the same date a year earlier, but the average stock at this date for the previous five years amounted to about 571,000 tons.

In regard to the prospects of the arrival of the early crop on the market there is little definite information to hand, but at all events the likelihood of the general spread of unsettled weather conditions, accompanied by seasonal temperatures would bring about a marked change in the situation.

ANNOUNCEMENTS AND REMINDERS.

Educational Exhibit at Balmoral Show.—The Educational Exhibit of the Ministry, which will be staged in the Central Exhibition Hall, at the Show of the Royal Ulster Agricultural Society at Balmoral on 25th, 26th, 27th and 28th May, will demonstrate various aspects of the work of the Ministry and include hints and advice in regard to many of the problems with which the farmer, the fruit and vegetable grower and the poultry keeper are confronted. Visitors to the Show should make a special point of looking through the Exhibition Hall.

Ox Warble Fly.—The fourth dressing with one of the recommended washes for the destruction of warble fly maggots in cattle should be carried out between the 7th and 14th June. Failure to dress affected cattle renders the owner liable to prosecution, and it should be noted that the Ministry is taking special note of those who are found not to have carried out fully the requirements of the Order with a view to such action.

Leather-Jacket Grubs in Oats. Where attack by leather-jacket grubs is suspected, immediate precautionary measures should be taken by the application of a Paris Green and bran bait. It is essential that this precaution should be carried out before the attack has had time to cause serious damage.

Destruction of Charlock.—Charlock in oats and flax can easily be destroyed by spraying with copper sulphate solution. This operation should be carried out before the weeds reach the flowering stage. See Leaflet No. 38 for particulars.

Sheep Dipping.—Sheep owners should note that the summer sheep dipping period extends from 15th June to 15th August. All sheep must be dipped twice within this period, with an interval of not less than seven or more than fourteen days between the two dippings.

Care of Eggs.—Particular attention is necessary in the handling of eggs during the summer months. The principal precautions to be observed are mentioned in the Poultry-Keeping Notes earlier in this Report.

Sessions at Ministry's Schools.—The next Session at the Ulster Dairy School, Cookstown, and at the North West School, Strabane, will commence on the 19th July. Applications for the free Scholarships offered to the North West School by each County Committee of Agriculture should be sent to the Secretary of the Committee for the County as soon as possible as the Scholarships are awarded in the order in which applications are received. There is no qualifying examination for these Scholarships. Applications for admission to the Ulster Dairy School should be sent to the Ministry of Agriculture. Copies of the prospectuses of these Schools, which contain application forms, will be sent on request.

EMPIRE EXHIBITION, SCOTLAND, 1938

It will be recollected that in the Ministry's Monthly Report for the month of March last details were given of the Ministry's plans in connection with the Empire Exhibition, Scotland, which was opened on the 3rd May by His Majesty the King at Glasgow. The plans then outlined duly reached fruition and it may fairly be claimed that the Ministry's Agricultural Marketing Exhibit is a leading feature of the pavilion which has been devoted to agriculture, fishery and forestry matters. The exhibit has already been seen by very many visitors and has been examined closely by many interested and competent critics. All those who have seen the exhibit are unanimous in their approval of it.

The exhibit is of interest from different points of view and whether it is regarded from the standpoint of decoration, instruction, general interest, or advertisement, it will be found satisfactory.

The staff on the Ministry's stand are receiving many enquiries from interested visitors and there can be no doubt but that substantial benefit to Northern Ireland agriculture must accrue, especially when it is realised that during the first three days of the Exhibition no fewer than a quarter of a million people passed through the turnstiles.

It should be added that there is available on the stand, for distribution to interested visitors, an attractive, illustrated brochure descriptive of Northern Ireland agricultural produce.

The Ministry's contribution to the United Kingdom Research and Education Exhibit which is housed separately in the Agricultural Pavilion is also attracting considerable attention. It consists of displays dealing with the flax and oat crops which have been most attractively arranged and particular interest is being shown in a shield bearing the Red Hand of Ulster which has been built up entirely of oat grains.

AGRICULTURAL IMPROVEMENT AND UNEMPLOYMENT RELIEF SCHEME.

The Scheme of Grants for the improvement of agricultural holdings by drainage and other works has now been amended, and in future grants will be available to farmers whose holdings do not exceed a Poor Law Valuation of £200. Previously grants were restricted to those holdings, the Poor Law Valuations of which do not exceed £75. Grants are also now available to all bonafide farmers whether they possess a subsidiary source of livelihood or not.

Grants will be available in respect of works of the following nature :—

(a) Drainage of agricultural land; removal of trees, hedges, whins, etc.
(b) Improvement of ditches and watercourses.
(c) Improvement of rivers and sea embankments.
(d) Stubbing of whins, fencing, and agricultural improvements of like nature.
(e) Construction of farm roads.
(f) Reclamation work.
(g) Construction and reconstruction of flax dams.
(h) Excavation of wells.

The grants will be made towards the cost of labour recruited specially for the various schemes from the local employment exchanges, but the Ministry's contribution will not be made in respect of cost of materials or implements. The rates of grant payable will be as follows :—

(1) Poor Law Valuation of £100 or under—85 per cent. of the labour cost of the scheme involved.
(2) Poor Law Valuations between £101 and £150—75 per cent. of the labour cost of the scheme involved.
(3) Poor Law Valuations between £151 and £200—50 per cent. of the labour cost of the scheme involved.

Copies of the amended scheme will shortly be available, and may be obtained on application to the Ministry, or from creameries or branches of the Farmers' Union and Young Farmers' Clubs.

SIXTEENTH EGG LAYING TEST AT STORMONT.

The seventh period of four weeks ended on the 14th April, 1938. There was a further increase in egg production, and a very slight decrease in the number of scoring eggs. The total number of eggs laid during the period was 13,862, which, on the basis of the entire flock, gives an average of 19.5 eggs per bird. Of this number 11,934 or 86.0 per cent. were scoring eggs (super grade and first grade), whereas the percentage of scoring eggs in the previous period was 86.2 per cent. The average egg production to date for all birds originally penned is 101.2 as compared with 108.02 for the first 28 weeks of the previous test.

The highest average sectional egg production is to the credit of the Rhode Island Reds in Section 3, viz., 20.8 eggs per bird, the Rhode Island Reds in Section 5 (c) being next with an average of 19.7 eggs per bird.

Twelve birds died during the period, bringing the total number of deaths to 52. This represents a mortality rate of 7.3 per cent. as compared with 4.05 per cent. for the corresponding 28 weeks of the previous test.

The mortality rate per cent. in each section to the end of the seventh period is shown in the following table :—

Section.	No. of birds.	No. of deaths.	Percentage mortality.
1	132	8	6.0
2	54	7	13.0
3	156	13	8.3
4	90	2	2.2
5a	54	3	5.5
5b	42	5	11.9
5c	108	7	6.5
6	72	7	9.7

The following are particulars of the leading pens in each Section at the end of the seventh period :—

SECTION 1. WHITE WYANDOTTES (OPEN). 22 PENS.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	10	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Londonderry.	168	525	135	5	693
2	7	Lt.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	282	379	43	1	661
3	19	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	260	375	95	1	635
4	16	Mr. T. J. M'Millan, Crossgar, Co. Down.	395	224	15	—	619

SECTION 2. WHITE LEGHORNS (OPEN). 9 PENS.

1	29	Mr. J. Stevenson, Maze View, Corcreeny, Hillsborough, Co. Down.	217	406	89	9	623
2	31	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh.	432	171	13	1	603
3	26	Mr. T. J. M'Millan, Crossgar, Co. Down.	334	207	26	—	541

SECTION 3. RHODE ISLAND REDS (OPEN). 26 PENS.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	39	Mrs. Hamilton Farr, Elsneuk, Dundrum Road, Newcastle, Co. Down.	523	197	12	1	720
2	49	Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim.	330	338	20	—	668
3	51	Mr. N. Ormsby, Harryville, Lisburn, Co. Down.	244	370	114	3	614
4	55	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	224	381	151	11	605

SECTION 4. ANY OTHER PURE BREED (OPEN). 15 PENS.

1	67	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Londonderry. (Buff Rocks.)	575	181	9	1	756
2	68	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Londonderry. (Buff Rocks.)	404	308	51	3	712
3	66	Greenmount Agricultural & Horticultural College, Muckamore, Co. Antrim. (Light Sussex.)	164	364	132	2	528

SECTION 5(*a*). WHITE WYANDOTTES (STATION-HOLDERS). 9 PENS.

1	76	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	144	470	179	1	614
2	82	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	320	291	48	—	611
3	81	Miss A. Peel, Aghadalgon, Roses Lane Ends, Belfast.	283	295	76	2	578

SECTION 5(*b*). WHITE LEGHORNS (STATION-HOLDERS). 7 PENS.

1	91	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	490	152	91	1	642
2	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	299	330	22	—	629
3	90	Mr. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	240	355	34	—	595

SECTION 5(*c*). RHODE ISLAND REDS (STATION-HOLDERS). 18 PENS.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	102	Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast.	354	381	31	—	735
2	104	Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down.	153	518	125	2	671
3	94	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	309	313	52	5	622

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 PENS.

1	116	Banbridge and District Poultry Club, Co. Down. (Rhode Island Red)	191	417	95	8	608
2	115	Ballywalter Young Farmers' Club, Co. Down. (White Wyandottes)	324	226	115	10	550
3	114	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red)	246	297	44	—	543

"Test Score" means the total of the super-grade and first-grade eggs.

Mr. R. Holmes' pen No. 67 of Buff Rocks in Section 4 now holds 1st place in the entire test, while Mrs. R. McGiffert's pen No. 102, of Rhode Island Reds in the Station-holders Section for that breed is second. Pen No. 39 of Rhode Island Reds in Section 3, entered by Mrs. Farr, retains third place.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of feeding stuffs at 1st May, 1938, at ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
Protein Foods :	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed (whole)	—	16 0	16 0	16 0	20 0	19 0	17 6	17 0	20 0	—
Linseed Cake, home-made ..	—	13 0	12 0	12 0	—	—	12 6	11 6	12 0	—
Linseed Cake, foreign	11 6	11 6	11 3	11 0	12 3	12 0	11 0	10 6	11 3	11 0
Linseed Cake Meal	11 6	13 0	11 3	11 0	12 3	12 0	12 6	12 0	11 6	11 0
Cotton Cake, decorticated ..	10 0	—	9 0	10 6	10 6	9 3	10 6	10 9	10 3	10 6
Earthnut Cake, decorticated ..	9 0	—	8 10½	9 6	—	8 6	9 6	9 0	—	9 6
Soya Bean Meal (extracted) ..	10 3	11 6	11 0	11 6	—	11 6	10 9	11 0	11 0	11 6
Fish Meal (60% protein) ..	17 0	17 0	16 3	16 6	—	16 6	17 0	16 6	17 0	17 0
Meat Meal (60% protein) ..	16 6	15 6	14 9	—	14 0	—	16 0	—	16 0	—
Meat and Bone Meal (40% protein)	—	11 0	10 6	10 0	—	12 0	11 6	—	—	12 6
Medium Protein Foods :										
Palm Kernel Cake	9 0	—	9 6	7 6	—	—	—	—	9 10½	—
Palm Kernel Meal	9 0	9 0	—	7 6	—	9 9	—	—	—	—
Starchy Foods :										
Maize (whole)	7 6	7 9	7 9	7 3	—	8 0	7 9	7 9	—	—
Maize Meal	8 0	8 0	7 9	7 9	8 0	8 0	7 9	8 0	8 0	8 3
Maize Flaked	8 3	8 6	8 3	8 3	8 3	8 6	8 6	8 6	8 9	9 0
Wheat (whole)	9 6	10 0	9 7½	10 0	11 0	11 0	10 0	—	—	—
Bran, Red	9 0	8 9	8 3	9 0	—	8 6	8 9	9 0	9 6	9 0
Bran, White	10 0	10 0	9 7½	10 0	10 0	10 3	10 0	10 6	10 9	10 6
Pollard, Brown	9 6	9 0	8 9	9 0	—	8 9	9 0	9 0	9 6	9 6
Pollard, White	—	10 0	9 3	10 0	10 0	9 0	10 0	10 6	10 6	10 6
Barley Meal	10 0	10 0	9 6	9 6	9 6	9 6	9 9	10 6	10 0	11 0
Tapioca Root Flour	7 6	8 0	7 9	—	—	7 9	7 6	—	—	—
Oats (whole)	9 6	9 0	8 6	9 3	7 0	8 6	10 0	9 0	7 6	8 8
Crushed Oats	10 0	9 6	9 0	9 9	7 6	9 6	10 6	10 0	8 6	9 8

NON-CONCENTRATES :—The average prices at representative markets at the beginning of May, 1938, were as follows :— Potatoes (Main Crop), 3/4d. per cwt. ; Turnips, 8d. per cwt. ; Upland Hay, 60/7d. per ton ; Meadow Hay, 48/4d. per ton ; Oat Straw, 42/7d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st May, 1938, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equivalent	Starch Equivalent	Average price per cwt. at 1st May, 1938	Average price per cwt. at 1st Apl., 1938	Cost per unit of protein equivalent May	Cost per unit of protein equivalent April	Cost per unit of starch equivalent May	Cost per unit of starch equivalent April
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	19.0	119.0	17 8	18 1	18 7	19 0	3 0	3 0
Crushed Linseed	19.0	119.0	18 9	18 11	19 9	19 11	3 2	3 2
Linseed cake (home-made)	25.0	72.0	12 2	12 3	9 9	9 10	3 5	3 5
Linseed cake (foreign)	25.0	72.0	11 4	11 5	9 1	9 2	3 2	3 2
Linseed cake meal	25.0	72.0	11 10	11 9	9 6	9 5	3 3	3 3
Decorticated Cotton cake	35.0	71.0	10 2	10 0	5 10	5 9	2 10	2 10
Decorticated Earthnut cake	41.0	73.0	9 2	9 7	4 6	4 8	2 6	2 7
Extracted Soya bean meal	38.0	64.0	11 2	11 0	5 11	5 9	3 6	3 5
Fish meal (60% protein)	53.0	59.0	16 9	16 9	6 4	6 4	5 8	5 8
Meat meal (60% protein)	55.0	61.0	15 6	15 5	5 8	5 7	5 1	5 1
Meat & bone meal (40% protein)	36.0	44.0	11 3	11 1	6 5	6 2	5 1	5 0
Medium Protein Foods								
Palm kernel cake	17.0	75.0	9 0	9 3	10 7	10 11	2 5	2 6
Palm kernel meal	17.0	75.0	8 10	8 11	10 4	10 6	2 4	2 5
Starchy Foods								
Maize	6.8	81.0	7 8	7 7	22 7	22 4	1 11	1 10
Maize meal	6.8	81.0	8 0	8 0	23 6	23 6	2 0	2 0
Flaked maize	8.6	83.0	8 6	8 7	19 9	20 0	2 1	2 1
Wheat	9.6	72.0	10 2	10 7	21 2	22 1	2 10	2 11
Red bran	10.0	43.0	8 10	9 0	17 8	18 0	4 1	4 2
White bran	10.0	43.0	10 2	10 2	20 4	20 4	4 9	4 9
Brown pollard	11.0	60.0	9 1	9 1	16 6	16 6	3 0	3 0
White pollard	11.0	60.0	10 0	10 1	18 2	18 4	3 4	3 4
Barley meal	7.0	70.0	9 11	10 1	28 4	28 10	2 10	2 11
Oats	7.6	60.0	8 9	8 7	23 0	22 7	2 11	2 10
Crushed oats	7.6	60.0	9 5	9 3	24 9	24 4	3 2	3 1
Tapioca root flour	1.0	83.5	7 8	8 2	153 4	163 4	1 10	1 11
Non-Concentrates								
Potatoes	0.6	18.0	3 4	2 2¼	111 1	72 11	3 8½	2 5
Turnips (Swede)	0.7	7.0	0 8	0 8	19 1	19 1	1 11	1 11
Upland hay	4.9	24.0	3 0¼	2 9½	12 4	11 5	2 6	2 4
Meadow hay	4.6	31.0	2 5	2 4¼	10 6	10 3	1 7	1 6
Oat straw	0.9	20.0	2 1½	2 1½	47 3	47 3	2 1½	2 1½

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes	75	2	0.1	21
Cabbage	89	1.5	0.5	8
Oat Straw	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard ...	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake	9	40	9	26
Decorticated Earthnut cake	10	46	7	23
Meat meal ...	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be consideredspecifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. This is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 61, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 61 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/10d.
Decorticated earthnut cake	...	...	4/6d.
Soya bean meal	...	...	5/11d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	5/11d.
Meat meal (60% protein)	...	...	5/8d.
Meat and bone meal (40% protein)	...		6/3d.

Therefore meat meal (60% protein) is the cheapest milk substitute for pigs at the present prices of the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/3d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per ton of fertilisers at 1st May, 1938, at representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Nitrogenous Manures :										
Nitrate of Soda (15.5% N.) ..	8 10 0	9 0 0	8 10 0	8 0 0	8 0 0	9 10 0	9 0 0	10 10 0	—	8 5 0
Sulphate of Ammonia (20.6% N.)	8 0 0	8 10 0	8 0 0	7 12 6	8 0 0	8 0 0	8 0 0	8 0 0	8 0 0	8 5 0
Nitro Chalk (15.5% N.) ..	8 0 0	8 10 0	8 0 0	7 10 6	7 18 6	9 10 0	8 10 0	9 0 0	8 10 0	8 5 0
Phosphatic Manures :										
Superphosphate (16% S.P.A.) ..	3 15 0	4 0 0	3 15 0	3 16 3	3 18 9	3 18 9	4 0 0	4 5 0	4 2 0	4 0 0
Semsol (5% S.P.A., 15½% P.A.) ..	3 12 6	3 12 6	3 12 6	3 5 0	3 10 0	—	—	3 15 0	—	3 10 0
*Basic Slag (18% to 20% P.A.) ..	4 0 0	—	4 0 0	3 15 0	4 0 0	—	—	4 0 0	—	—
Gafsa Rock Phosphate (26% P.A.)	3 5 0	3 5 0	3 5 0	2 15 0	3 5 0	—	—	3 10 0	—	3 5 0
Potash Manures :										
Kainit (14% P.) ..	—	—	—	3 2 6	—	3 12 6	3 10 0	—	3 10 0	3 15 0
Potash Salts (20% P.)	4 10 0	4 10 0	4 10 0	4 0 0	4 5 0	4 10 0	4 10 0	5 10 0	4 10 0	4 5 0
Potash Salts (30% P.)	5 15 0	—	—	5 5 0	—	5 7 6	5 15 0	6 5 0	5 17 6	5 12 6
Muriate of Potash (50% P.) ..	8 15 0	9 10 0	8 10 0	8 10 0	8 15 0	9 0 0	9 0 0	9 10 0	9 0 0	9 0 0
Agricultural Salt	1 10 0	2 0 0	—	3 10 0	2 5 0	—	1 15 0	2 0 0	—	3 10 0

Abbreviations : N—Nitrogen. S.P.A.—Soluble Phosphoric Acid. P.A.—Phosphoric Acid. P—Potash.

*If obtained under the Land Fertility Scheme, the price of British made basic slag will be 25 per cent. less than the figures quoted, since a subsidy equivalent to one-quarter is payable.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure and this method of determining values is the only sound basis on which two different manures or two grades of the same manure, supplying the same fertilising ingredient, can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, at the prices ruling at Belfast for the various manures, as shown on the table on page 66, the costs of the units of the fertilising ingredients are as follow :—

Nitrate of Soda (15.5% N.)	10/3¾	(Nitrogen)
Sulphate of Ammonia (20.6% N.)	7/4¾	,,
Nitro Chalk (15.5% N.)	9/8½	,,
Superphosphate (16% S.P.A.)	4/9¼	(Phosphoric Acid)
Semsol (5% S.P.A., 15½% P.A.)	3/2	,,
Basic Slag (18% to 20% P.A.)	4/2	,,
Gafsa Rock Phosphate (26% P.A.)	2/1½	,,
Kainit (14% P.)	4/5½	(Potash)
Potash Salts (20% P.)	4/–	,,
Potash Salts (30% P.)	3/6	,,
Muriate of Potash (50% P.)	3/4¾	,,

It is seen that the price of 14% Kainit is £3 2s. 6d. per ton, and of 30% Potash Salts is £5 5s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/6d., whereas the cost of a unit of potash in Kainit is 4/5½d. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing at Belfast Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of phosphoric acid at Belfast, as shown in the table above, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid: whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three.

PRICES OF AGRICULTURAL SEEDS

The following table shows the average retail cash prices of seeds at 1st May, 1938, with comparative figures for the corresponding date in 1937 and 1936.

		1938	1937	1936
Corn (Seed) :				
Oats (Irish grown)	per cwt.	10 1½	10 5	7 2
,, (imported)	,,	12 9	13 6	9 1
Barley (Irish grown)	,,	12 0	13 1	9 0
,, (imported)	,,	14 0	14 7	12 0
Root and Green Crops (Seed) :				
Turnips (Swede)	per lb.	1 10	2 9	2 0
,, (Aberdeen)	,,	1 5	1 7	1 4
Mangels	,,	1 3	1 5	1 5
Carrots	,,	4 10	3 9	4 11
Parsnips	,,	3 0	1 7	2 0
Rape	,,	0 6½	0 6	0 7
Clover Seeds :				
Broad Red	,,	1 1	1 0	0 11
Late-flowering Red	,,	1 6½	1 7	
White	,,	1 7	1 3	1 0
Wild White (Kentish)	,,	6 0	8 1	3 11
Alsike	,,	1 6½	1 3	1 5
Flax Seed :				
Commercial Varieties—				
Dutch, Riga ..	per bag of 13 to 14 stone	35 0 to 50 0	42 0 to 46 3	45 0 to 48 0
Pure Line Blue-flowering Varieties—				
Stormont Gossamer, Stormont Cirrus ..	per cwt.	57 6 to 60 0	75 0	67 6 to 70 0
Liral Crown, Liral Dominion, Liral Monarch	,,	55 0 to 75 0	75 0	55 0 to 75 0
J. W. S.	,,	32 0	40 0	58 9
White-flowering Concurrent ..	,,	33 0	37 4	39 5
Grass Seeds :				
Irish Perennial 28 lb. to bushel ..	per bushel	5 0	7 2	6 1
26 lb. ,, ..	,,	4 3	6 6	5 7
Scots Perennial 28 lb. ,, ..	,,	6 2	8 5	7 2
Irish Italian 22 lb. ,, ..	,,	4 6	5 1	5 2
French Italian 22 lb. ,, ..	,,	5 0	6 1	6 8
Cocksfoot	per lb.	0 9	0 8	0 6
Meadow Fescue	,,	0 8¼	0 9	0 8
Timothy	,,	0 6¾	0 7	0 6
Crested Dogstail	,,	1 3½	1 6	—
Rough-stalked Meadow Grass ..	,,	1 10	2 2	—

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

Trade and values of fat stock at the Belfast auction marts last month became rather irregular through several causes. In the first week of the month the quality of the stock was very good, and trade was keen at improved rates. In the second week, however, when larger supplies were forward, the foot-and-mouth disease restrictions in England made shippers cautious, and they bought only for immediate requirements. The result was that trade weakened and prices declined. The Easter holidays in the following week interfered with supplies, although the demand was keen and prices improved. In the last week of the month fairly large supplies of good quality cattle were on offer. Local butchers and shippers were fairly active, but the Anglo-Eire discussions had an adverse effect on the markets. Prices for the best were little changed, but generally values were a little cheaper. On the whole, the average price for the month of April was 1/- firmer than in March at 42/- per live cwt., the general ranges being as follows:—

Top qualities—42/6d. to 46/- per live cwt.
Good commercial lots—41/6d. to 43/- per live cwt.
Rougher types—40/6d. to 41/6d. per live cwt.

Trade in store cattle during the month was also affected by the causes mentioned above, and the demand became gradually less active. Particularly in the last days of the month, sales were hard to make, but prices were not greatly affected since sellers preferred to keep their animals rather than accept the lower rates offered. Best types of store cattle throughout the month made from 45/- to 50/- per live cwt. according to quality and finish.

Supplies of dairy cattle were much smaller last month, and good quality animals were again scarce. Trade in this section also was adversely affected by the foot-and-mouth disease restrictions, and values generally tended downward.

At the auction sales of fat sheep and lambs supplies were increased except in the holiday week. Spring lambs were marketed in large numbers, and trade for these remained fairly brisk all month, especially for home requirements. Prices ruled up to 65/- each, the majority of sales taking place at from 45/- to 55/-. In the last two weeks of the month ewes with single or double lambs were in good request and made up to £3 each. The relaxed state of the market in the last week of the month, however, affected all classes of sheep, and with a weaker demand prices cheapened.

PRICES OF FAT STOCK.

Week ended		*Per cwt.*	*Week ended*		*Per cwt.*
9th April, 1938	..	42/6	10th April, 1937	..	41/3
16th „ „	..	41/9	17th „ „	..	41/6
23rd „ „	..	42/3	24th „ „	..	43/3
30th „ „	..	41/9	1st May, 1937	..	44/5
Average for Month	..	42/–	Average for Month	..	42/6
7th May, 1938	..	41 –	8th May, 1937	..	44/–

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description.		Week ended 2-4-38	Week ended 9-4-38	Week ended 16-4-38	Week ended 23-4-38	Week ended 30-4-38
Fat Cows	Range of 1st quality	£15 to £21	£15 to £21	£15 to £20	£15 to £20-15	£15 to £21-10
	,, 2nd ,,	£12 to £16-10	£12 to £16-10	£12 to £16	£12 to £16-10	£11 to £16-10
Store Cattle :						
Forward Stores	Range of 1st quality	£15-10 to £20-10	£16 to £21-10	£15-10 to £17-7-6	£15-10 to £17-7-6	£15-10 to £18-5
	,, 2nd ,,	£12-10 to £16	£14 to £16	£12-15 to £15	£13 to £15-5	£13 to £15-10
Calves (under 12 months)	,, 1st ,,	£10-10 to £12-15	£11-10 to £14	£9-10 to £12	£10-10 to £12-10	£9-5 to £12-10
	,, 2nd ,,	£5-10 to £9-15	£6-5 to £10-10	£8 to £9-5	£8 to £10	£6-5 to £8-15
Dairy Cattle :						
Milch Cows	Range of 1st quality	£22 to £26	£21 to £25-15	£22 to £28	£22 to £25	£22 to £27
	,, 2nd ,,	£18 to £21	£16 to £20	£18 to £21	£18 to £21	£18 to £21
Springers	,, 1st ,,	£19 to £21	£20 to £21-15	£19-10 to £27-5	£20 to £23-15	£20 to £23
	,, 2nd ,,	£16 to £18	£16 to £19	£17-10 to £19	£17 to £19	£17 to £19
Sheep and Lambs :						
Crossbred & White Ewes	Range of 1st quality	45/- to 60/-	40/- to 59/-	40/- to 55/6	40/- to 50/-	40/- to 50/-
	,, 2nd ,,	35/- to 49/-	30/- to 50/-	30/- to 42/-	30/- to 42/-	30/- to 39/-
Blackface Ewes	,, 1st ,,	34/- to 46/-	35/- to 46/-	32/- to 43/-	31/- to 45/-	27/6 to 42/-
	,, 2nd ,,	25/- to 34/-	25/- to 35/-	25/- to 34/-	20/- to 34/-	20/- to 34/-
Crossbred & White Lambs	,, 1st ,,	40/- to 67/-	42/- to 62/6	42/- to 66/-	42/- to 58/-	42/- to 55/-
	,, 2nd ,,	30/- to 49/-	30/- to 50/-	30/- to 46/-	30/- to 44/-	30/- to 44/-
Blackface Lambs ..	,, 1st ,,	20/- to 33/6	22/- to 31/-	20/- to 33/-	21/- to 34/6	20/- to 27/6
	,, 2nd ,,	15/- to 24/-	16-/ to 21/-	15/- to 23/-	17/6 to 24/-	15/- to 20/-
Rams	,, 1st ,,	50/- to 57/6	45/- to 60/-	45/- to 60/-	44/- to 53/-	48/- to 65/-
	,, 2nd ,,	40/- to 51/-	38/- to 52/-	38/- to 49/-	35/- to 45/-	35/- to 47/-
Spring Lambs	,, 1st ,,	——	50/- to 65/-	50/- to 63/-	50/- to 57/-	42/- to 53/-
	,, 2nd ,,	——	38/- to 48/-	40/- to 49/-	40/- to 48/-	35/- to 46/-

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of April, 1938.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months old)	Fat Sheep (over 2 years old)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight.	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
1	Moy	—	46/– to 50/–	40/–	15 3/9	13 17/6	15 7/6	—	*2 15	—
									†1 10	
5	Omagh	7 16	43/6 to 47/6	39/9	17 10	17 10	15 10	†2 2/6	†2 2/6	—
6	Londonderry ..	—	37/6 to 46/–	38/–	18 0	—	—	—	—	1 12
6	Rathfriland ..	7 9/6	43/– to 46/–	40/–	18 0	18 10	17 5	†2 8	*1 18/6	1 12
									‡1 10	
7	Ballymoney ..	7 12/9	40/3 to 44/–	—	18 0	16 0	14 10	—	—	1 15
7	Strabane	6 0	43/6 to 46/–	39/6	14 0	—	—	—	—	—
8	Ballygawley ..	—	35/– to 46/6	40/6	16 0	—	16 0	—	†1 17/6	2 0
8	Irvinestown ..	9 3/3	45/– to 50/–	38/–	16 10	17 10	16 0	†1 17/6	*2 5	1 17
11	Enniskillen ..	7 2	39/– to 45/–	41/–	15 0	15 0	13 10	—	—	1 17
13	Crossgar	—	40/– to 44/–	—	17 10	17 0	—	—	—	2 0
13	Kilrea	6 0	39/– to 45/–	40/–	20 0	21 0	—	*2 0	—	1 13
16	Portadown ..	6 5	37/– to 41/–	40/–	18 0	17 0	20 0	—	—	1 15
18	Camlough ..	7 10	43/– to 49/–	40/–	18 0	17 0	14 0	—	—	—
20	Lisnaskea	6 14/6	35/– to 45/6	42/–	18 0	17 0	16 0	—	—	1 15/6
21	Ballynahinch ..	—	42/– to 45/–	—	18 10	17 10	16 5	—	—	2 0
21	Moneymore ..	6 17/6	42/– to 49/–	40/–	18 10	16 5	17 0	†1 15	†2 0	1 16/3
22	Fintona	9 4/9	45/– to 50/–	40/6	16 5	17 0	16 0	†2 5	†1 17/6	1 18
28	Antrim	—	—	41/–	19 0	18 10	—	—	—	1 17/6
29	Castlederg ..	7 0	45/6 to 47/–	41/–	12 10	15 0	—	—	†1 15	1 15
29	Killylea	—	30/– to 44/–	41/–	16 10	—	15 0	—	†2 0	—
30	Ballymena ..	7 4/9	31/– to 44/–	—	24 0	22 0	21 10	—	—	2 0

* Long Wool. † Downs and Crossbred. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:— Months of April, 1938, March, 1938, April, 1937; Four months ended 30th April, 1938, and 30th April, 1937.

PORTS OF :—	CATTLE						SHEEP				PIGS			Horses
	Fat	Stores	Milch Cows	Spring-ers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	
Belfast	4,072	6,191	812	105	—	11,180	1,053	—	197	1,250	4,923	—	4,923	285
Larne	13	2,485	—	3	—	2,501	—	—	—	—	1,271	191	1,462	43
Londonderry	612	5,440	5	16	651	6,724	180	—	18	198	339	—	339	11
Newry	43	36	—	—	—	79	—	—	—	—	—	—	—	—
Total, April, 1938 ..	4,740	14,152	817	124	651	20,484	1,233	—	215	1,448	6,533	191	6,724	339
Total, March, 1938 ..	5,758	20,201	1,005	65	359	27,388	1,847	—	12	1,859	6,938	179	7,117	235
Total, April, 1937 ..	5,492	24,686	1,085	155	1,171	32,589	1,605	—	592	2,197	12,033	320	12,353	310
Total, Four Months ended 30th April, 1938 ..	21,298	59,788	3,811	299	1,508	86,704	13,712	—	227	13,939	33,681	728	34,409	939
Total, Four Months ended 30th April, 1937 ..	28,610	68,967	4,188	357	1,973	104,095	17,104	—	658	17,762	44,729	1,072	45,801	804

IMPORTS AND EXPORTS

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st March, 1938, and the three months ended 31st March, 1938, with comparative figures for the corresponding periods in 1937. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.				EXPORTS.			
	Month ended 31st March		Three Months ended 31st March		Month ended 31st March		Three Months ended 31st March	
	1938	1937	1938	1937	1938	1937	1938	1937
Bacon .. .. cwt.	3,014	2,798	9,159	6,582	26,745	37,260	84,413	101,240
Hams .. .. cwt.	1,344	1,409	3,881	4,319	11,981	11,227	32,638	30,698
Pork .. .. cwt.	172	885	644	2,420	2,304	3,399	7,001	8,935
Butter .. .. cwt.	20,522	18,949	48,405	46,038	325	189	739	491
Eggs .. .. Gt. Hds.	154,996	86,378	252,215	155,017	316,643	270,539	593,521	509,918
Oat Products (inc. Oatmeal) cwt.	1,305	3,205	5,783	6,688	5,396	9,540	18,081	30,069
Potatoes .. .. tons	289	1,134	756	2,332	*26,639	*28,387	*74,569	*77,222
Poultry .. .. cwt.	273	401	818	1,297	9,916	13,399	71,970	75,227
Grass Seeds .. cwt.	2,570	1,345	6,306	4,229	59,140	47,469	134,013	147,238

* These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

There were no imports of oats direct from abroad during March, 1938, or in the corresponding month last year.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 20 fairs in Northern Ireland during the months of April, 1937, and March and April, 1938.

Description of Live Stock.	April, 1937.		March, 1938.		April, 1938.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	7,485	6,239	6,998	5,940	7,644	5,679
Fat Cattle ..	1,582	1,469	1,504	1,383	1,485	1,383
Dairy Cattle ..	1,163	956	1,263	1,038	1,229	970
Sheep ..	368	291	218	162	564	433
Lambs ..	36	5	158	87	98	78
Young Pigs ..	3,282	2,230	2,432	2,197	3,192	2,597

ACCOUNT OF TRADE AT FAIRS.

The numbers of store cattle at fairs held during April showed slight increases over March, but were still slightly below the average for the time of year. The quality and condition of the animals remained consistently good. The usual shippers and dealers attended and a very keen demand continued up to the last week in the month. Good clearances were effected at higher rates right up to the end of the month when the effects of the drought on grasslands, together with the uneasiness as to the future trend of trade created by the Anglo-Eire agreement, resulted in a slowing up of business. In the last week demand slowed up very considerably, but prices for best qualities were not much affected. Second and third quality beasts, however, eased in price. Black polly stores were in best demand throughout the month. Average supplies of fat cattle at the fairs were generally of good quality and in fair condition. Trade all month was steady, and previous prices were well maintained and in many cases exceeded. Demand was keenest for well-conditioned young medium weights of from 8 to 10 cwts. Supplies of dairy cattle were small to medium. The majority of the stock on offer was cleared fairly easily, but at prices that tended to decline somewhat. Nice coloured springing heifers remained in good demand, as did useful types of newly-calved cows. Generally speaking, well-uddered animals were easily sold, but rough and inferior types were hard to cash and frequently lower in price.

Sheep and lambs were in much larger supply and in good local request all month. Fat sheep were easily cashed at remunerative prices, and breeding ewes with lambs at foot were also in brisk demand. Prices on the whole were a little better than formerly.

Slightly larger supplies of young pigs met a keen enquiry, and prices in most districts showed further advances on the month. The average price for all centres was 9d. firmer at 36/9d. each. Trade for store pigs followed a similar trend. Brood sows were a variable trade according to centre. On the whole demand was fairly good, good quality Yorks being in favour. The price range for sows was from £6 to £11 according to quality.

20th May, 1938.

This report is issued free on application to the Secretary,
Ministry of Agriculture, Stormont, Belfast.

MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

No. 1. Flax Seed
„ 2. Improvement of Farm Poultry.
„ 3. Feeding for Egg Production.
„ 4. Marketing of Eggs.
„ 5. The Dishorning of Calves.
„ 6. The Packing of Apples in Standard Boxes
„ 7. Potato Trials.
„ 8. Seed Testing for Farmers.
„ 9. The Renovation of Orchards.
„ 10. Fruit Tree Pests—Capsid Bugs.
„ 11. Fruit Tree Pests—Aphides and Apple Sucker.
„ 12. Fruit Tree Pests—Caterpillars.
„ 13. Contagious Abortion in Cattle.
„ 14. Cheese-making on the Farm.
„ 15. Suitable Varieties of Fruit.
„ 16. The Feeding of Dairy Cows.
„ 17. Home Bottling of Fruits and Vegetables.
„ 18. Marketing of Dead Poultry.
„ 19. How to Feed Linseed.
„ 20. The Hatching and Rearing of Chickens.
„ 21. The Uses and Advantages of Portable Poultry Houses.
„ 22. Leather-jacket Grubs.
„ 23. The Handling and Care of Wool.
„ 24. Fluke in Sheep.
„ 25. The Rearing and Management of Young Horses.
„ 26. Ordnance Survey Maps for Farmers.
„ 27. How to Keep Eggs Clean.
„ 28. The Construction of a Laying House for Poultry.
„ 29. The Selection and Breeding of Laying Hens.
„ 31. Coccidiosis in Poultry.
„ 32. Roup of Poultry (Fowl Pox).
„ 33. Spraying Calendar for Apple Orchards.
„ 34. The Pruning of Apple Trees.
„ 35. The Fattening of Pigs.
„ 36. Advantages of Milk Recording.
„ 37. The Raising and Fattening of Turkeys.
„ 38. The Destruction of Charlock.
„ 39. The Production of Clean Milk.
„ 40. The Laying Down and Management of Temporary Pastures.
„ 41. Blackleg, Blackquarter or Quarterill.
„ 42. The Purchase of Balanced Rations for Dairy Cows
„ 43. Tuberculosis in Poultry.
No. 44. Results of Crop Experiments.
„ 45. The Breeding and Rearing of Pigs.
„ 46 Hints for Winter Egg Production.
„ 47 The Care and Management of Sheep
„ 49. American Gooseberry Mildew.
„ 50. Potato Blight.
„ 51. Butter-making on the Farm.
„ 52. Gapes in Chickens.
„ 54. The Breeding and Rearing of Calves.
„ 55. Destruction of Ragwort or Bendweed.
„ 56. Identification of Egg Supplies.
„ 57. How to have Eggs of First Quality.
„ 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
„ 59. Bacillary White Diarrhoea (Pullorum Disease).
„ 60. Advantages of Winter Agricultural Classes.
„ 61. The Care and Management of Breeding Bulls.
„ 62. The Production of Timber on the Farm.
„ 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
„ 64. The Destruction of Warble Fly Maggots in Cattle.
„ 65. The Packing of Apples in Barrels.
„ 66. Seed Testing Facilities for Traders.
„ 67. The Cultivation of Vegetables.
„ 68. The Cultivation of Strawberries.
„ 69. The Construction of Piggeries.
„ 70. Ringworm.
„ 71. The Cultivation of Raspberries.
„ 72. Tree Planting for Shelter and Ornament.
„ 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
„ 74. New Pure Strains of Flax.
„ 75. Pig Production and the Pigs Marketing Scheme.
„ 76. Acarine (Isle of Wight) Disease of Bees.
„ 77. Licensing of Milk Producers and Distributors.
„ 78. Graded Milk.
„ 79. The Picking and Storing of Apples.
„ 80. Hoose or Husk in Farm Stock.
„ 81. The Construction of Cow Houses.
„ 82. White Scour in Calves.
„ 83. The Care, Management and Feeding of the Poultry Breeding Stock.
„ 84. Lime and Liming.

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

No. 1. Phosphatic Fertilisers.
„ 5. Why Pay a Tax on the Horns of Cattle ?
„ 8. Basic Slag.
„ 9. Smut in Oats.
„ 10. Purchase of Fertilisers and Feeding Stuffs.
„ 11. Fertilisers and Feeding Stuffs Act—General Summary.
„ 12. The Treatment of Liver Fluke.
„ 13. The ox-Warble Fly.
„ 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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